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March 16, 1992

Dave Jansen
Hanford Project Manager
Nuclear & Mixed Waste Management Program
Washington State Department of Ecology
M.S. PV-11
Olympia, Washington 98504-8711

Re: Comments of US Ecology, Inc. on the Proposed RCRA "Part B" Permit for the Hanford Facility (Permit No. WA 789008967)

Dear Mr. Jansen:

We are filing the enclosed comments on behalf of US Ecology regarding the above-referenced proposed permit. In light of the fact that these comments have been prepared during US Ecology's first opportunity to review the Proposed Permit, we are available to meet with you to discuss them. Please direct any responses to or questions about these comments to Barry Bede of US Ecology, (206) 754-3733, or to David Dabroski, (206) 583-8885.

Sincerely yours,

David Dabroski

Anthony J. Thompson
David Dabroski WSBA #18408

TT:DD:sab

Enclosure

cc: Brad Dillon
Barry Bede

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COMMENTS OF US ECOLOGY, INC.
ON THE PROPOSED RCRA "PART B" PERMIT
FOR THE HANFORD FACILITY
(PERMIT NO. WA7890008967)

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COMMENTS OF US ECOLOGY, INC.
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I. INTRODUCTION

A. Summary

Since 1965, US Ecology Inc. ("US Ecology") or its predecessors have operated a low-level radioactive waste disposal site on the Hanford Federal Reservation. The site is one of the nation's four licensed commercial low-level radioactive waste sites and is the express subject of Congressional action under the Low-level Radioactive Waste Policy Amendments Act of 1985. Because of the need for long-term institutional control at radioactive waste sites, Atomic Energy Act ("AEA") regulations require federal or state land ownership prior to disposal. Therefore the US Ecology site is located on the Hanford Federal Reservation and subleased from the state of Washington, which holds a long-term lease with the United States. The site is and always has been physically separate and legally distinct from the other activities at Hanford.

As is well known, the Hanford Reservation has long been the site of a variety of federal activities involving nuclear power and weapons research and production. As part of a major

program under the Hanford Federal Facility Agreement and Consent Order ("FFACO") with EPA to clean up the wastes from these activities, the United States Department of Energy ("DOE") (together with its contractors, Batelle and Westinghouse) has applied for a permit (the "Proposed Permit") to build and operate a waste treatment facility regulated under the federal and state hazardous waste programs. As part of this Proposed Permit, corrective action will be required at all solid waste management units ("SWMUs") within the permitted "facility". Although several hundred SWMUs directly related to DOE activities have been identified on the Hanford Reservation, many of these SWMUs were determined to be of little or no consequence and so are not included in the Proposed Permit. Neither US Ecology nor any of its operations has any tie to the weapons work that has led to the massive clean-up efforts now under way at Hanford. Yet, in defiance of this basic fact, United States Environmental Protection Agency ("EPA") and the Washington Department of Ecology ("WDOE") have included "corrective action" requirements covering the US Ecology site in a proposed hazardous waste treatment permit for DOE, Batelle and Westinghouse wastes.

US Ecology was not consulted in the drafting of the Proposed Permit and only at this late date, has it been provided with any opportunity to demonstrate that the portions of the Proposed Permit that would apply to the US Ecology site

cannot be justified under either the law, the facts or sound public policy. For these reasons, as discussed more fully below, US Ecology hereby requests that all references to its facility be deleted from the Proposed Permit.

In these comments, US Ecology demonstrates that this proposed extension of corrective action to the US Ecology site is entirely without statutory or regulatory underpinnings:

- The US Ecology site cannot lawfully be included in the "facility" covered by the Proposed Permit. US Ecology is not a party to the Proposed Permit. Its operations at the site are physically separate from the rest of the Hanford Reservation and they have no relation to any of the activities covered by the Proposed Permit or to any of the Proposed Permittees. US Ecology's landlord is the State of Washington, which is not a permittee under the Proposed Permit. None of the permittees enjoy any real measure of control over the US Ecology site.

- All environmental concerns at the US Ecology site are **already** pervasively and adequately regulated under the AEA. Imposing RCRA regulation as well could add nothing but a conflicting and separate set of timetables, a separate set of administering

agencies, and a real chance of creating completely incompatible and contradictory requirements.

- The US Ecology site has never been subject to regulation under the Federal RCRA or the Washington Hazardous Waste Management Law.

These defects in themselves bar any application of hazardous waste laws to the US Ecology site. They also add up to a conclusive demonstration that applying these requirements would be "inconsistent" with the AEA under RCRA § 1006(a).

After a brief background discussion, we will address each of these points in more detail.

II. BACKGROUND

The Hanford Nuclear Reservation is a 570 square mile tract of Federally owned land, much of which has been used since the 1940s for nuclear weapons activities, first by the Manhattan Project, then by the Atomic Energy Commission ("AEC") and finally by its successor, the Department of Energy.

In 1964, the State of Washington leased from the AEC a 1000 acre portion of the Hanford Reservation that had never been used for any Federal activities. The lease had a 99-year

term and placed full responsibility for environmental compliance and clean-up on the State of Washington.

In 1965, the State of Washington subleased 100 acres to California Nuclear, Inc, predecessor of US Ecology for use as a low-level waste disposal facility. The sublease was negotiated in 1976. If all renewal options are exercised, it will expire in the year 2015--48 years before the State lease expires. In both the 1965 and 1976 subleases, the site operator agreed to assume the same environmental obligations imposed on the State of Washington in the prime lease with the federal government. US Ecology is now bound by those same obligations.

As described in detail below, US Ecology has always operated under a comprehensive framework of AEA regulatory requirements and detailed licenses, issued either by the Federal government or by the State of Washington as an Agreement State, that address all environmental concerns the site might present. All low-level waste ever received at the site has been accepted and disposed of in accordance with that framework. In addition to low-level waste, the site contains a trench used between 1968 and 1972 to bury chemical waste. The existing license requires US Ecology to study the environmental impact of this trench and address any concerns it may present during site closure.

The US Ecology site has never been regulated under RCRA. In 1980, the company submitted a RCRA "Part A" application as a protective measure. In 1985, as ordered by EPA, Region 10, US Ecology submitted a "Part B" application as a protective measure. In both of its 1980 and 1985 cover letters to the applications, US Ecology pointed out the entire lack of any basis for RCRA jurisdiction. (Appendices A and B).[1] In the 1985 letter, US Ecology explained that RCRA regulation would be inconsistent with the AEA regulations that already applied. Although EPA claimed that "scintillation vials" received at the site were "hazardous waste", the letter demonstrated that the toluene and xylene in those vials was part of a "commercial product" and was not covered by EPA waste listings. In addition, these vials were received from "small quantity generators" and were exempt from RCRA regulation. (See Attachment A to Appendix B, "Scintillation Vials").

Despite repeated inquiries from US Ecology, neither EPA nor DOE ever processed that application nor reacted to US Ecology's arguments in any way.

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[1]With the exception of Appendices C and E, all documents referenced in these comments are already in the possession of EPA or WDOE. If not already, we expect that any referenced documents will be made a part of the administrative record for the Proposed Permit.

Meanwhile, the efforts to clean up the weapons facilities at Hanford moved forward without any involvement by US Ecology. In 1989 the DOE entered into the comprehensive FFACO providing for the clean-up of the weapons sites at Hanford. US Ecology had no involvement in negotiating the FFACO and is not bound by it.

Nor was US Ecology included in the initial or any subsequent amended permit applications to implement the FFACO submitted by the DOE to EPA and the WDOE. Nevertheless, the permit as it emerged from review by these agencies includes the US Ecology site in "corrective action" requirements.

As we discuss in more detail in Appendix C, the discussion of US Ecology in the Proposed Permit is misleading and incomplete in its portrayal of the past history of the site and its environmental condition, and completely ambiguous in its portrayal of the regulatory agencies' intentions. It seems to have been written to maximize both the case for RCRA jurisdiction, and the discretion of the agencies to do what they like once RCRA jurisdiction has been successfully asserted.

III. DISCUSSION

A. The Ecology Site Cannot Legally Be Part of the "Facility" Covered by the Proposed Permit

As noted earlier, US Ecology is not a party to the Proposed Permit. The function of the Proposed Permit is to grant the regulatory approvals that are needed so that clean-up of areas contaminated during **federal** nuclear operations can proceed. The Proposed Permit expressly states (pp. 4 and 5) that "[e]nforcement of all the conditions of this permit, including Part IV [which governs the US Ecology site], will be primarily through the procedures identified in [the FFACO]." US Ecology is not a party to the FFACO and played no part in negotiating it. Instead, as discussed below, US Ecology's closure obligations are fully set forth in the Closure Plan prepared under the AEA.

Despite this complete lack of relationship between the subjects of the Proposed Permit and either US Ecology or its operations, the Proposed Permit purports to impose RCRA obligations concerning the US Ecology site on the DOE as the "owner" of this land, which is counted as part of the larger Hanford facility for "corrective action" purposes.[2] Both the

[2] In this regard, US Ecology formally notes that any statements in the Proposed Permit that could be taken as binding US Ecology directly are legally indefensible and must be withdrawn.

description of DOE as the "owner" and the assertion that this site is part of the larger "facility" are attenuated to the breaking point.

Although this land is formally owned by the DOE, since 1964 it has been leased by the State of Washington under a 99-year lease expiring in the year 2063. The State of Washington agreed in that lease to take full responsibility for any environmental clean-up at the site. In other words, the Federal contacts with this land have been reduced to the absolute minimum consistent with retention of formal title.

US Ecology now operates at the site as the State of Washington's sublessee, under a sublease with the State of Washington effective through the year 2015--48 years before the expiration of the state lease. Both US Ecology and the State are obliged by their leases to fully remedy any environmental contamination at the site. To assure that these clean-up obligations will be met, the State of Washington by statute has created both a "perpetual maintenance account" and a "closure account" designed specifically to address this site. The language and history of RCRA § 3004(u) demonstrate that any assertion of corrective action jurisdiction in such circumstances is improper.

In attempting to impose RCRA corrective action at the US Ecology facility, EPA and WDOE have fundamentally misapprehended the RCRA corrective action scheme.

Under RCRA § 3004(u), corrective action is required:

> "for all releases of hazardous waste or constituents from any solid waste management unit at a treatment, storage or disposal facility seeking a permit under this subchapter. . ."

42 U.S.C. § 6924(u). (Emphasis added).

Similarly, EPA's 1985 "codification rule" interpreting this provision notes that:

> Section 3004(u) requires corrective action for all releases of hazardous waste or constituents from any solid waste management unit at a facility seeking a RCRA permit regardless of the time at which such waste was placed in the unit.

50 Fed. Reg. 28702, 28714 (July 15, 1985) (Emphasis added).

EPA's "codification rule" also notes that:

> Section 3004(u) does not appear to contemplate that its terms apply to solid waste management units located at facilities that are not required by regulation to obtain a subtitle C permit. Id.

Both the regulations and the statute are clear: corrective action only applies to those who seek a RCRA permit. Moreover, the price for failure or refusal to conduct corrective action is denial of a RCRA permit.

US Ecology is not now seeking nor has it ever sought, except under compulsion, any such RCRA permit. As discussed later, these permit requirements do not apply and never have applied to US Ecology. Therefore, it is apparent that RCRA § 3004(u) is not legally applicable to US Ecology or to the US Ecology facility.

Indeed, even a superficial examination of the Proposed Permit reveals inconsistencies in asserting RCRA corrective action over US Ecology. For instance, do EPA and WDOE expect Westinghouse, Batelle and DOE to enter onto the US Ecology site and perform or pay for any corrective action? Who would bear any liability for failure to properly perform such corrective action? Who will pay for its costs? Can corrective action be reconciled with the site closure plan already submitted to the Washington Department of Health ("WDOH")? If not, who will bear the costs of its revision?

Moreover, if the final permit does require DOE, Batelle and Westinghouse to undertake corrective action at the US Ecology facility, those entities would be forced to seek legal access to the site to conduct corrective action. Neither Batelle nor Westinghouse have any legal means or authority for doing so and any attempt to do so might well be beyond their contractual authority. Although DOE has leased the site to the state of Washington, who, in turn, subleased it to US

Ecology, US Ecology has no direct contractual obligation to DOE. Therefore, even DOE has, at best, an extremely limited legal ability to enter upon and control conditions at the US Ecology site.[3] Moreover, it may only do so by virtue of its arrangements with the state, which is not a permittee. It is both common sense and clear from the Proposed Permit that the obligations imposed in the permit are the sole responsibility of the permittees. Therefore, as a legal matter, US Ecology has no responsibility under the Proposed Permit at all. Yet the permit purports to require corrective action at the US Ecology site.[4]

In its July, 1985 codification rule, EPA defined the term "facility" quite broadly. According to the rule,

> the term "facility" is not limited to those portions of an owner's property at which units for the management of solid or hazardous waste are located but rather extends to all contiguous property under the owner or operator's control.

50 Fed. Reg. 28702, 28712 (July 15, 1986).

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[3]Indeed, US Ecology is bound by its own license and the accompanying framework to restrict site access. Commercial low-level radioactive waste disposal sites operate pursuant to a different AEA scheme than do DOE and its contractors. Because of this fact, personnel familiar with the DOE regulatory regime may simply be unqualified to enter upon and conduct operations at a commercial site such as the US Ecology facility. Forced entry by DOE may well violate the sublessee's right to quiet enjoyment of its property.

[4]A separate document discussing and detailing additional conflicts and inconsistencies is included as Attachment C.

However, EPA also noted that:

> [t]he extent to which the above interpretation applies to federal facilities raises legal and policy issues that the agency has not yet resolved.

Id.

In 1986, EPA issued a Notice of Policy and Interpretation regarding those "unresolved issues". 51 Fed. Reg. 7,722 (March 5, 1986). EPA simultaneously issued a Notice Of Intent to propose rules regarding the same issue. 51 Fed. Reg. 7,723, (March 5, 1986).

In its Notice of Policy and Interpretation, EPA took note of the problem posed by allowing corrective action to be triggered on contiguous federal lands administered by different agencies with different responsibilities. According to EPA: "In the Western half of the United States, contiguous federal lands cover large portions of several states". 51 Fed. Reg. 7727 (March 5, 1986). Because of this fact:

> a permit for a hazardous waste management located anywhere on [such a] . . . collective federal facility could trigger corrective action requirements for every solid waste management unit found within its boundaries . . . [and] the agency that operates such a unit might not have authority to require or manage clean-up of solid waste management units on lands administered by other federal agencies. Id.

To address this problem, EPA proposed to limit the "facility" subject to corrective action to land within the jurisdiction of "major departmental subdivisions that exercise independent management authorities." Id. That principle dictates excluding the US Ecology site from corrective action here, since it properly falls under the jurisdiction of the Nuclear Regulatory Commission rather than the DOE.

In addition, EPA addressed the relationship for corrective action purposes between publicly owned lands and private entities operating under long-term leases. To address this problem, EPA noted in its Notice of Intent of proposed rulemaking, that:

> EPA intends to propose a rule that limits Federal agency responsibility for facilities operated by private parties with legal ownership interests by identifying a "principal owner" for the purpose of defining the "facility" boundary under section 3004(u). The "principal owner" probably would be the person most directly associated with operation of the hazardous waste facility. Only property within the scope of the "principal owner's" legal interest would be considered the "facility" for corrective action purposes. Id.

EPA explained this proposal by noting:

> To determine whether a private party on federal lands should be treated as a "principal owner", EPA might consider factors such as the degree of control the federal agency exercises over the private party's actions, or the amount of benefit the agency derives from the private party's waste management operation. EPA will also need to consider the impact of this concept on private lands where one private party has granted legal ownership interests to

a second private party that operates a hazardous waste "facility." Id.

Although EPA has not yet promulgated this rule, it is clear from this notice and from the plain language of the existing EPA definition of facility that contiguous property not under the owner's control is not included within definition of a facility subject to corrective action. Here, DOE has no control over US Ecology's operations. Nor does DOE derive any benefit from the State of Washington's sublease with US Ecology, since that sublease does not affect the payments the state must make to DOE under the principal lease. Indeed, our situation presents a stronger case against "corrective action" than the example given in the notice, in which private companies had leased federal land directly. In this case, it is the State of Washington, not US Ecology that has leased land from the federal government.[5] Since DOE has essentially no control over the US Ecology site, and Batelle and Westinghouse have none, US Ecology cannot be considered to be within the "facility" to be permitted. Corrective action is therefore without legal basis.

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[5]It is also well worth noting that federal/state land ownership at the US Ecology facility did not happen by accident, nor was it due to any concerns regarding hazardous waste or any other material subject to EPA jurisdiction. In fact, federal or state land ownership is required under the AEA in order to ensure long-term institutional site control. See 10 C.F.R. 61.54. Use of this fact as a means of proving corrective action jurisdiction at the facility cannot have been intended and is inconsistent with the AEA.

B. The Washington Model Toxics Control Act ("MTCA") Is Inapplicable

In spite of the fact that corrective action may not be legally be imposed upon the US Ecology facility, the Proposed Permit nevertheless announces its intention to attempt regulation of the US Ecology site using whatever legal authority it can find. The permit categorically states that:

> It is the intent of the regulatory agencies to have the US Ecology site remediated.

Given this announced intent, in order to extricate it from obvious difficulties inherent in applying RCRA corrective action to US Ecology, the proposed permit states that:

> To accomplish this [remediation of the US Ecology site] however, Ecology intends to address remediation of the site under the authority of the Model Toxics Control Act (MTCA). Based on the results of the remedial investigation, a decision will be made in the next phase of the work.

Apart from the fact that this provision applies uniquely to US Ecology and that MTCA is mentioned no where else in the permit, use of a proposed RCRA permit to impose MTCA-type cleanup requirements on US Ecology is patently illogical and without a legal foundation. Congress enacted two statutes, RCRA and CERCLA, not one, and the purposes are quite different. Washington State counterparts to these laws (Hazardous Waste Management Act and MTCA) are similarly distinct.

This distinction is apparent when the Proposed Permit itself is examined, even without any basic understanding of the difference between RCRA and CERCLA and their state counterparts. The Proposed Permit itself states repeatedly that CERCLA past practice ("CPP") units are not included within the Proposed Permit. As noted in the Fact Sheet for Proposed Permit Conditions IV.A.1.b of CERCLA, CPP units are completely excluded from the terms of this Permit as they fall within the regulatory authority of the CERCLA program as opposed to the RCRA program. The same distinction undeniably holds true for the state RCRA and CERCLA counterparts.

As discussed in detail below, the US Ecology site is pervasively regulated by United States Nuclear Regulatory Commission and the WDOH under authority of the AEA. The AEA completely and utterly occupies the field in its area. Under its coverage, states may only regulate source, special nuclear and by-product material through the AEA Agreement State Program. State statutes, including statutes such as MTCA are preempted by the federal program and may not be used to compel cleanups of "Federally Permitted Releases" at AEA sites.

Congress, in enacting CERCLA, recognized that CERCLA could not sensibly (and quite possibly constitutionally) be applied to releases that were permitted, authorized or even required under federal law. Based on this recognition,

Congress exempted "Federally Permitted Releases" from CERCLA liability. 42 U.S.C. § 9607(j). Moreover, the broadest exemption found in the definition of a "Federally Permitted Release" is for:

> Any release of source, special nuclear or by-product material, as those terms are defined in Atomic Energy Act of 1954, in compliance with the legally enforceable license permit, regulation or order pursuant to the Atomic Energy Act.

42 U.S.C. § 9601(10)(K). The US Ecology low-level radioactive waste and special nuclear material site unquestionably qualifies for this exemption.

If WDOE and EPA are interested in asserting CERCLA/MTCA jurisdiction over the US Ecology site, it cannot do so by virtue of a RCRA permit issued to a third party; they must use the legal authorities given to them in those statutes. Federal law does not permit use of CERCLA to require cleanup of "Federally Permitted Releases." There are significant factual, legal, and policy issues regarding whether MTCA could apply to the U.S. Ecology site. Use of a RCRA permit (issued to a third party) to impose MTCA requirements on an AEA-regulated site, licensed by their sister agency, WDOH, simply does not provide such authority.

C. The US Ecology Facility Is Pervasively Regulated By The WDOH Pursuant To The AEA Agreement State Program

1. Introduction

As one of the nation's four licensed commercial low-level radioactive waste disposal sites, the US Ecology site is subject to controls under the AEA and the State of Washington agreement state program designed to protect human health and the environment over the next few hundred years from all environmental dangers that any waste at the site might present. The AEA ("AEA") requirements applicable to the site either meet or exceed the standards applicable to hazardous waste under subtitle C of RCRA or differ from them due to the unique nature of radioactive waste. Indeed, it is the AEA, not RCRA that represents the nation's first "cradle to grave" regulatory scheme. This point is not merely academic since retroactive application of RCRA to an Atomic Energy scheme that predated RCRA clearly imposes duplicative and even flatly inconsistent requirements.

Low-level waste disposal at the US Ecology site has always been conducted pursuant to AEA requirements. To date there has been no showing that these requirements were insufficient in any way, much less that they need to be supplemented by RCRA "corrective action." Indeed, § 3004(u) corrective action was designed for unregulated disposal units.

Under US Ecology's license, only specified classes and types of properly packaged and manifested low-level radioactive waste may be received. Burial of waste at the site is strictly regulated. Applicable requirements include waste segregation methods, proper disposal trench design and maintenance, and use of interim covers and site buffer zones. NRC and OSHA standards for worker protection from radiation and other hazards also apply.

Site operations are also subject to a detailed site environmental monitoring program that covers potential releases to or through groundwater, air, soil, vegetation, wildlife and direct radiation exposure pathways. These monitoring requirements have never indicated any releases of hazardous substances in excess of allowable limits. Any "corrective action" studies would simply duplicate the controls already required or authorized by this monitoring program.

The AEA license requires closure of the US Ecology site under a detailed plan designed to maintain full environmental protection at the site well into the final half of the 21st Century. Here, too, any RCRA "corrective action" requirements would at best be meaningless duplication. In further illustration of these points, a brief summary of the site

characteristics, trench operation, monitoring, and closure requirements of the US Ecology site is set forth below.

2. Site Characteristics

The US Ecology site is located between the 200E and 200W areas of the Hanford federal reservation and is more than six miles from its boundary. It is miles from any activities subject to the Proposed Permit. There are no permanent residents on the Hanford Reservation. Access to both the Hanford reservation and the US Ecology facility is controlled. The nearest population center is Richland, Washington, which is 27 miles from the US Ecology site. See Appendix D.

The site climate is characterized as a mid-latitude semi-arid desert. Average annual rainfall for the area is approximately 6.3 inches, most of which occurs during the winter. Because of hot, dry conditions in the non-winter months, the annual evaporation potential exceeds annual precipitation--resulting in a net moisture deficit potential of more than 23 inches per year. Thus, infiltration of water into the disposal site is only possible between November and January, when precipitation exceeds evapotranspiration potential. Because of the presence of caps specifically designed to prevent infiltration and provide for run-off of precipitation, combined with the small annual rainfall, there

is only a very small risk that any precipitation will penetrate into or build-up in any disposal units.

There are no surface streams located directly on the US Ecology site.[6] Flooding at the site is extremely unlikely. In 1987, the United States DOE issued an Environmental Impact Statement for the Hanford site that concluded that neither a 100 year flood of the Yakima or Columbia rivers nor a 50% breach of the Grand Coulee dam would result in site flooding. See, Final Environmental Impact Statement: Disposal of Hanford Defense High Level, Transuranic and Tank Wastes. (DOE/EIS-0113).

The water table lies at least 323 feet below the site. The annual recharge at the site is estimated at about 0.2 inches per year. Based on these calculations, travel time through the vadose zone above the unconfined aquifer has been estimated at approximately 1060 years. If, as is planned, a cap is placed over waste to prevent the infiltration of water, recharge rates are estimated to be 0.08 inches per year resulting in a travel time through the vadose zone of more than 1400 years. Moreover, because operations at the Hanford site have artificially raised groundwater elevations,

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[6]Surface waters in the area include the Columbia River, the Yakima River and Cold Creek, a small, seasonal stream.

cessation of these operations will ultimately result in a significant groundwater depression, thereby adding an additional 350 years of travel time through the vadose zone. These travel times and recharge rates indicate that US Ecology will be able to fully comply with environmental release conditions applicable to the site through its license. They also indicate that releases of hazardous or dangerous substances to groundwater within the 30-year time frames contemplated by RCRA are most unlikely. Moreover, as discussed more fully below, US Ecology has installed groundwater and vadose monitoring wells at its facility and also conducts regular groundwater monitoring at the site to ensure that any releases of hazardous substances are immediately detected and remedied.

3. License Requirements

a. Legal Background

The US Ecology site is licensed by the state of Washington pursuant to its agreement state authority delegated by the United States Nuclear Regulatory Commission ("NRC") under section 274 of the AEA, 42 U.S.C. § 2021 and 10 C.F.R. part 150. US Ecology also operates pursuant to a special nuclear material license issued by the NRC. Relevant standards applicable to the site under the agreement state program are found at WAC title 402 and are promulgated under

authority of the Washington Nuclear Energy and Radiation Control Act, RCW § 70.98.

These regulations include standards equivalent to federal regulations issued by NRC found at 10 CFR parts 20 and 61. Although the US Ecology site existed prior to NRC's 1982 promulgation of 10 CFR part 61 requirements for the land disposal of radioactive wastes, these standards, or their equivalent, are nevertheless applicable to the site in many instances through the site license originally issued under the authority of 10 CFR part 20. In addition, US Ecology is subject to detailed licensing requirements that are site specific and generally based upon the regulatory requirements referenced above.

b. **Waste Receipt and Packaging**

Since operations began in 1965, all low-level waste received at the site has been disposed of in trenches under carefully specified design waste form and operating conditions that are designed to comply with the evolving and comprehensive NRC regulatory scheme.

All such waste must be packaged and transported in accordance with applicable U.S. Department of Transportation Regulations and NRC regulations. License condition 14. No pyrophoric, hazardous, reactive or chemically explosive

materials or materials violently reactive to water or agitation may be received at the site. License Condition 20. Wastes may not contain or be capable of generating toxic gases, vapors or fumes during transportation, handling or disposal. License Condition 19.

The State of Washington Radioactive Materials license makes clear the importance of proper waste form in the regulatory scheme. See generally, License Conditions 24-38. In general, all materials received at the site containing liquids must be stabilized, solidified or treated by sorption prior to disposal. License conditions 24 and 25 require the following:

> Except as allowed under Conditions 28 and 32, untreated liquids and sludges are not allowed for disposal. Liquids shall be rendered noncorrosive prior to treatment . . . Wet sludges or slurries such as evaporator bottoms shall be noncorrosive and shall be treated by stabilization or solidification....Liquids treated by stabilization shall be processed . . . using an approved stabilization medium. The resulting waste form shall contain no detectable, freestanding liquid and shall meet the stability requirements [found in NRC guidance and regulations]....

Id.

The permit notes that sorption of liquids is acceptable so long as the liquids are packaged in a DOT class 7A metal container lined with a 4 mil. plastic liner and the liquid is

contained in enough approved sorbent material to absorb at least twice the volume of waste. License condition 27.

For all these reasons, there are only minimal amounts of liquids, if any, buried at the site and minimal potential exists for their release due to the nature of their disposal, site climatological conditions and the lack of liquids in other wastes disposed alongside these materials.

License condition 22 requires that all waste be properly classified and marked as class A,B or C wastes in accordance with NRC rules and that stability be achieved either through stabilization or site engineered barriers (contingent upon express WDOH approval). These requirements insure that even after the required institutional control period of 100 years, wastes at the site and the disposal units themselves will remain stable enough to eliminate any significant risks of exposures to the public for the foreseeable future.

c. **Trench Design and Operation**

All low-level waste received since the US Ecology site began operating is contained in separate trenches located on approximately 30 acres of the facility. For trenches 1-6, waste placement terminated at three feet below grade. For all subsequent trenches, waste placement terminated at 8 feet below grade.

Once the trenches are filled, an interim cover approved by the WDOH must be installed along with interim markers displaying information regarding the disposal unit and the waste found within. The interim covers consist of up to 10 feet of site soils placed on the trench after backfilling of 3 or 8 feet of site soils brings the trench level up to grade. Six inches of cobble to form an interim cap are then placed above grade. Trenches are then super-charged with up to twenty feet of excavated soil, in order to minimize subsidence and prevent infiltration.

Final cover at the site is specifically designed to prevent any infiltration of water into the trench and eliminate any possibility of radiation exposure. Final covers at the site will consist of multilayered caps constructed with a low permeability geocomposite liner, followed by a synthetic cover, a liquid collection system and site soils. By placing an impermeable cap equipped with a liquid collection system over the trenches, the possibility of any liquids entering the trenches, is virtually eliminated.

The NRC radioactive waste disposal scheme differs fundamentally from the RCRA subtitle C requirements in its rejection of synthetic under liners and active maintenance, like leachate pumping. Because radioactive wastes may remain threatening for hundreds of years after the usual 30 year RCRA

post closure period has expired, radioactive waste disposal sites may not rely upon such approaches. Instead, AEA sites rely upon natural liners and carefully selected site characteristics as a means of retarding and mitigating releases of radioactive materials. This system of controls is characterized as passive rather than active and represents a fundamentally different control philosophy from RCRA.

In addition, NRC's ALARA concept requires that exposure of workers and the public remain As Low As Reasonably Achievable ("ALARA"). This too works against active maintenance since active maintenance measures such as those required under RCRA would result in increased exposure of workers and the public to radioactivity.

d. Site Environmental Monitoring Requirements

The site is subject to an extensive environmental monitoring program approved by the WDOH and the NRC. To date, there has been no showing by EPA or WDOE that supplementary efforts are necessary, beneficial or otherwise justified. See License Conditions 54-56.

Five groundwater monitoring wells are sampled on a quarterly basis for a wide variety of both radioactive and chemically hazardous constituents including pH, conductivity, nitrate, uranium, tritium, strontium, total organic carbon,

total organic halogens, tetrachloromethane, tetrachlorethane, dioxane, methylethyl, pyridine and formaldehyde.

Samples are also analyzed for concentrations of benzene, toluene and xylene. To date the general range of concentrations for these latter constituents has been measured at no more than 2 parts per billion. Thus, there is no indication that any significant release has occurred. If it were to occur in the future, it would be detected immediately. Given these facts, no sound basis exists for imposing duplicative corrective action requirement at the site. Under the closure plan, groundwater monitoring will continue at the site for at least the next 100 years.

Perpetual care and maintenance accounts have been budgeted for sampling and closure purposes. To date, the Perpetual Maintenance Account contains approximately $18.6 million; the Site Closure Account contains approximately $10.4 million. A more detailed description of these accounts is contained in Appendix E.

US Ecology has also installed two vadose zone monitoring wells to experiment with soil gas sampling and analysis techniques. Vadose zone monitoring would provide additional protection against releases to groundwater by monitoring releases to the environment above the unconfined aquifer. Potential concentrations of both toluene and benzene, as well

as tritium, would be monitored, thereby providing additional protection against the possibility of releases of chemical constituents.

e. Site Closure and Stabilization

As required by its licenses for both byproduct material and special nuclear material, US Ecology has prepared, and operates in accordance with, a detailed site stabilization and closure plan approved by both the state of Washington and the NRC that is designed to assure protection of health and the environment over the next 200-500 years. This closure plan is fully integrated into the current site license.[7]

The US Ecology closure plan contemplates two closure scenarios: Lease Closure and Capacity Closure. Under lease closure, the site would cease operations in the year 2063. A two year closure period would then follow ending in the year 2065. After a stabilization period, the custodial agency, (the State of Washington/DOE) would take over at the site. Institutional controls at the site under this scenario would be expected to last until at least 2167. Under the capacity closure scenario, the site would reach capacity in the year

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[7]It duplicates all significant environmental protections contained in the Part B permit application that US Ecology submitted under protest in 1985, but that EPA and WDOE never processed.

2112 and institutional controls would last until the year 2216. As is evident, these time frames exceed the usual 30-year RCRA post closure time frames by a factor of three.

The closure plan outlines a number of closure methods that will not require active maintenance and that will be compatible with future plans for the site. These include site security measures, installation of permanent monuments to avoid intrusion into waste trenches, federal land ownership and an extensive perpetual care and maintenance fund. Because the land will be owned in perpetuity by the federal government, most likely as a permanent part of the Hanford federal reservation, there is little likelihood of inadvertent use of the site for incompatible purposes.[8]

As is apparent from the foregoing discussion, the site license and the closure plan will amply protect human health and the environment from potential hazards. No showing that the WDOH oversight is inadequate has been made. The WDOH and NRC approved closure plan is specifically designed to detect

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[8]By letter dated October 29, 1985, US Ecology requested the WDOE, as the agency responsible for the administration of the lease, to place a notice in the deed as required by RCRA that the land has been used to manage hazardous waste and its use is restricted. Consistent with all correspondence since 1980, this letter again states that the Part B application was a protective filing because US Ecology did not believe it had accepted RCRA hazardous waste. See Part B Application, Attachment 2-6.

and adequately remedy any releases or future releases at the site, of any chemicals or radionuclides.

The chemical trench identified by EPA as a SWMU in the draft permit is covered by the closure plan. Since no releases from that trench have been detected, it is apparent that closure under AEA type conditions has functioned acceptably and will likely continue to do so. In addition, the closure plan provides express authority for future remedial action should that prove necessary.

Similarly, all structures, equipment and materials at the site, such as the other potential SWMUs identified in the Proposed Permit,[9] must be dismantled, decontaminated and disposed of prior to site transfer.

The initial closure plan has been approved by both the NRC and the State of Washington. An amendment submitted in October of 1990 is awaiting final approval. Imposition of RCRA corrective action at this time can only serve to disrupt this process costing NRC, WDOH and US Ecology significant time and resources with no corresponding environmental benefit.

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[9]SWMU 3, the resin ranks, were removed and the surrounding soil remediated pursuant to a plan approved by the State. SWMU 4 requires no further action. See Draft RCRA Facility Assessment Report by RRC Environmental Management, Inc.

Neither EPA nor WDOE has demonstrated any real need to impose corrective action at the US Ecology site. Indeed other SWMUs or potential SWMUs on the Hanford Reservation that are unquestionably part of the permitted "facility" and are far less pervasively regulated than the US Ecology site are not addressed at all in the Proposed Permit.

US Ecology is not attempting to avoid the need for environmental controls. But the proper agency to impose such controls is the WDOH. If EPA and WDOE are concerned about the potential SWMUs at the site, they should have raised such concerns in the far more appropriate context of the closure plan submitted to WDOE's sister agency WDOH. They could have consulted with or requested that WDOH require further monitoring or investigation of potential SWMUs. There has certainly been no claim or showing by EPA or WDOE that regulation by WDOH is not fully adequate to protect human health and the environment. EPA and WDOE should reconsider their initial decision to assert jurisdiction over the site for its own sake.

This point comes into even clearer focus when one considers that the state, through WDOE, is the lessee at the site and responsible for administering the perpetual care and maintenance fund. WDOE should well consider its role in exposing the State of Washington to further liability concerns

by affirmatively seeking the imposition of duplicative regulatory requirements at a site for whose clean-up it is financially responsible.

C. The Ecology Site Has Never Been Subject to RCRA Regulation

As noted earlier, EPA has never addressed US Ecology's arguments demonstrating that the US Ecology site never fell under the RCRA regulations. Yet those arguments were and are clearly correct:

- As US Ecology pointed out in 1985, the toluene and xylene in scintillation vials was not covered by EPA's 1980 listings of "spent solvents" because scintillation vials are commercial chemical products, not solvents. See "comment" to 40 CFR 261.33(d) and 45 Fed. Reg. 78541 (Nov. 25, 1980). EPA has expressly admitted that the original 1980 solvent listings only covered solvents in their pure form and could not have covered scintillation vials. 50 Fed. Reg. 18378 (April 30, 1985). Even when EPA broadened those listings at the end of 1985, it gave no indication that it intended to cover

scintillation vials thereafter. 50 Fed. Reg. 53316 (Dec. 31, 1985).[10]

- In addition, as the 1985 scintillation vial memorandum also made clear, any such vials were covered by a "small quantity generator" exemption and excluded from substantive RCRA regulation.

- US Ecology believes that scintillation vials are "byproduct" material exempt from RCRA regulation under the exclusion for "source, byproduct and special nuclear" material in RCRA § 1004(27). The clear purpose of this exclusion is to avoid duplicate regulation of substances that are comprehensively regulated under the AEA. To accomplish that purpose, it must apply to scintillation vials.

- EPA itself has conceded that because of the uncertainty about the regulatory status of "mixed waste", that waste did not become subject to RCRA regulation until 1986--well after US Ecology had stopped accepting scintillation vials. On

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[10]In any event, US Ecology stopped accepting scintillation vials in 1985. Accordingly, whatever EPA's December 31, 1985 rule might have provided, it would not have applied to US Ecology's activities.

September 23, 1988 EPA issued a Federal Register notice allowing facilities handling "mixed waste" to qualify for "interim status" under RCRA exactly as though "mixed waste" had only become subject to RCRA jurisdiction in 1986. 53 Fed. Reg. 37048. Since the US Ecology site stopped receiving scintillation vials in 1985, it never became subject even to the requirement to qualify for "interim status", much less to any other RCRA regulatory requirement.

- The chemical trench stopped accepting waste in 1972, well before the RCRA regulations were ever promulgated. For that reason, it, too, never came under RCRA jurisdiction.

In short, the US Ecology site has never disposed of wastes that were subject to RCRA regulatory requirements at the time they were being managed. The argument for EPA jurisdiction over the hazardous component of "mixed waste" has always rested on the need to assure compliance with the "hazardous waste" regulatory standards of RCRA subtitle C. That basic justification is totally absent here.

D. Assertion Of RCRA Jurisdiction Over The US Ecology Facility Would Be Inconsistent With The Requirements Of The AEA

We have shown that the US Ecology site cannot lawfully be included in the Proposed Permit because (1) the US Ecology site has no relation to the Proposed Permit and therefore cannot be part of the "facility" that it covers; (2) all environmental risks at the site are already comprehensively regulated under the AEA, and (3) the site has **never** been subject to RCRA regulation.

Each of these arguments stands on its own. But each of them also demonstrates that including the US Ecology site in this permit would be "inconsistent" with the AEA within the meaning of RCRA § 1006(a), which provides that:

> nothing in this Act shall be construed to apply to (or to authorize any state, interstate, or local authority to regulate) any activity or substance which is subject to ... the AEA of 1954 ... except to the extent that such application (or regulation) is not inconsistent with the requirements of such Acts.

In using the term "inconsistent", Congress picked a word with an accepted meaning, and set it in a context that can only make that meaning broader.

When a statute allows states to regulate an area except where state rules are "inconsistent" with Federal regulation, state rules are preempted if they contradict Federal

requirements and if they present "an obstacle to the accomplishment and execution" of the Federal scheme--for example, if they

> address matters already covered by the federal regulations, impose substantial burdens on applicants, and create the risk of confusion, conflicts and delays.

Southern Pac. Transp. v. Public Serv. Com'n of Nevada, 909 F.2d 352, 355, 357 (D.C. Cir. 1990). Courts have applied the same principle under the AEA, finding that, despite a specific reservation of state authority over non-radioactive wastes, the Federal statute preempts state regulation of waste streams in which radiation and non-radiation hazards are "inextricably intermixed." Brown v. Kerr-McGee Corp., 767 F.2d 1234 (7th Cir. 1985).[11] If we use these authorities to interpret the term "inconsistent" in RCRA § 1006(a), we must conclude that RCRA will cease to apply whenever it would "substantially interfere" with efforts under the AEA to regulate radioactive waste.

But in fact, the term "inconsistent" should receive a **broader** reading where it addresses the relationship between two Federal statutes than it has received where the

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[11]Accordingly, to the extent "corrective action" requirements in the proposed permit might rest on state law, they would also be preempted. See Pacific Gas and Electric Company v. State Energy Resources Conservation and Development Commission, 461 U.S. 190 (1983).

relationship between the states and the Federal government is at issue. In the second case, the question concerns the relationship between two Constitutionally separated levels of government. Duplication and inconsistency that might be acceptable so as to assure the ability of each level to achieve its major goals should have no place in cases where two statutes must be reconciled at the same level of government. Indeed, RCRA requires EPA to administer RCRA consistent with all "other Acts of Congress [that] grant regulatory authority to the Administrator", RCRA § 1006(b), so as to "avoid duplication."[12] These principles set forth in § 1006(b) of RCRA must also govern the determination of "inconsistency" between statutes set out in § 1006(a). If they did not, then there would be less incentive to achieve harmony in statutory interpretation between agencies than there is to achieve harmony among EPA statutes, even though harmony between agencies is clearly both needed more and intrinsically harder to accomplish. Accordingly, "inconsistency" within the meaning of RCRA § 1006(a) must include needless duplication between two regulatory schemes serving the same function.

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[12]See U.S. v. Burns, 512 F. Supp. 916 (W.D. Pa. 1981). (In light of the PCB regulatory scheme under the Toxic Substances Control Act, EPA could not seek injunctive relief under RCRA for improper handling, storage, and disposal of PCBs.)

Nothing in EPA or DOE regulations, or in any other source of law, contradicts this natural reading of the statutory language and purpose. RCRA § 1004(27) automatically excludes "source, byproduct and special nuclear material" from RCRA regulation. EPA and the DOE have both taken a very narrow view of what this term covers. But they did this largely because they viewed the "inconsistency" provisions of RCRA § 1006(a) as a more flexible and policy-oriented vehicle for avoiding conflicts than the definition of "solid waste," with its accompanying exclusion for "source, byproduct and special nuclear" materials. See 52 Fed. Reg. 15937, 15940 (May 1, 1987). Yet despite numerous promises of forthcoming clarification, neither DOE nor EPA has **ever** clarified what "inconsistency" actually means, either in general or in the context of a specific regulatory action.[13]

Accordingly, the question must be addressed in this permit proceeding. If ever a case where RCRA application was inherently weak, it is this one.

First, the same activities that RCRA "corrective action" would address are **already** subject to comprehensive AEA

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[13]Since neither EPA nor DOE has interpreted the meaning of "inconsistent" in this proceeding, no conflict between agency approaches has yet emerged. But in the event of such a conflict, it is clear that the DOE interpretation, not the EPA interpretation, would govern. [See 52 Fed. Reg. 15937 (May 1, 1987).

regulation, both under the operating license, and under the Closure Plan.[14]

Second, the US Ecology site **never** came under the RCRA hazardous waste regulatory system. Yet it is the need to make this system applicable to ongoing waste management activities that has justified all prior EPA assertions of jurisdiction over nuclear facilities.

Third, since the **prospective** RCRA **regulatory** requirements of Subtitle C have no application to the US Ecology site, any assertion of RCRA jurisdiction must rest on the need to make "corrective action" applicable. But "corrective action" lies at the periphery, not the center, of RCRA's statutory purposes. The argument for invading the jurisdiction of other agencies to make "corrective action" applicable is far weaker than the argument for a similar effort to extend the reach of Subtitle C.

Fourth, the US Ecology site has a separate purpose, a separate operator, and completely separate operations from anything directly covered by the Proposed Permit. It cannot

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[14]Indeed, as noted earlier, the Closure Plan includes the key terms from the Part B RCRA permit application that US Ecology submitted under protest in 1985, but that EPA never processed.

lawfully be included in that "facility" for corrective action purposes.

There is nothing RCRA corrective action could accomplish at this site that has not already been required--generally in a stricter and more elaborate form--under the AEA. RCRA might require the wastes at the site to be characterized. But under the AEA, they were characterized before they were ever accepted--only certain types of wastes were allowed. RCRA might require monitoring. But groundwater monitoring is already required as an operating condition, and more monitoring will be required as a closure condition. RCRA might address the security of waste disposal. But the exact present and future methods of waste disposal have already been set out in the operating license and the closure plan. RCRA might address the chemical trench. But the chemical trench is already being addressed under the Closure Plan.

In short, this is a case for the principle: **Meaningless duplication is "inconsistency."** EPA and the WDOE have proposed a permit that will require US Ecology to deal with a completely new set of regulatory agencies, on a new timetable, over matters already addressed and long settled under the AEA. EPA and the WDOE may defend their actions by asserting that it is not yet clear that any flat conflict in requirements will result. But it is already clear both that there will be a

duplication of regulatory burdens, with no environmental benefits. The inclusion in RCRA of a specific bar on "inconsistent" activities means nothing if it does not cover cases like this.

IV. CONCLUSION

The US Ecology facility cannot lawfully be included within the Proposed Permit to be issued to DOE and its Contractors. US Ecology is not and was not a party to the Proposed Permit. DOE and its contractors exercise no control over the US Ecology facility. Without a permit issued to US Ecology, EPA lacks statutory authority to require corrective action. The US Ecology facility is and has been pervasively regulated by WDOH and NRC since 1965. Imposition of RCRA corrective action upon US Ecology would produce no discernable environmental benefit. Any claim by EPA to RCRA jurisdiction over the site is tenuous at best. Imposition of RCRA corrective action requirements upon the site threatens the viability of the existing closure plan for the site and is either duplicative or flatly inconsistent with carefully considered regulatory provisions designed in accordance with regulations promulgated under authority of the AEA.

The Proposed Permit seeks, without reason, justification, or legal authority to impose RCRA corrective action at the US Ecology low level radioactive waste and special nuclear materials

disposal site regulated by the WDOH and the NRC. Neither EPA nor WDOE have participated in or expressed more than a passing interest in the extensive regulation of the site by their sister agencies, the NRC and WDOH. Yet they now seek, solely by virtue of a permit issued to a third party, to intrude upon the operation of one of the nation's principal low level radioactive waste disposal sites. If EPA and WDOE have concerns regarding the environmental safety of the US Ecology site, the proper, economical and legally correct course of action would be for them to consult with the agencies that bear primary responsibility for the site. Yet it is precisely because neither EPA nor WDOE can properly articulate such a concern in any credible fashion that they are forced to strain both the law and the facts as they have done.

This tortured misapplication of a proposed RCRA permit to impose cleanup requirements upon US Ecology at the cost of abrogating fundamental distinctions between their own statutes is a feeble attempt to overcome the obvious deficiencies in the agencies approach under RCRA. It raises troubling questions about the agencies motivation and, at a minimum, demonstrates how truly ill-considered their actions are. EPA and WDOE have more than enough to do at the Hanford Reservation without looking for additional projects that lie well beyond their statutory authority. This is particularly so where there is nothing to be gained by way of environmental protection.

Nuclear Engineering Company, Inc.
9200 SHELBYVILLE ROAD, SUITE 526 · P. O. BOX 7246
LOUISVILLE, KENTUCKY 40207 PHONE (502) 426-7160

November 18, 1980

EPA Region X
M/S 530-A
1200 Sixth Avenue
Seattle, WA 98101

EPA ID #: WAD060048360

Gentlemen:

Nuclear Engineering Company, Inc. operates a commercial low-level radioactive waste disposal facility at Richland, Washington. The site is operated under the authority of the State of Washington, pursuant to Section 274 of the Atomic Energy Act of 1954, 42 USC 2011, et seq (AEA), as amended.

It is the position of Nuclear Engineering Company that it is neither the intent of RCRA nor the regulations adopted by EPA thereunder that the radioactive waste disposed at our facility be subject to RCRA. However, in order to preserve our rights should it be ultimately determined that certain of our activities are in fact subject to RCRA, we filed a "Notification of Hazardous Waste Activity" prior to August 19, 1980, and subsequently received an EPA identification number for our facility.

On October 24, 1980 (see attached) we requested of Mr. Costle an RIM which would permit the State of Washington, under its Section 274 agreement with the NRC, to continue to regulate those low-level radioactive waste disposal activities presently being carried out at our Richland site. As of this date the EPA has not responded to our request.

Under the circumstances, we are filing Form 1, General Information, for the Consolidated Permits Program with the Environmental Protection Agency in order to preserve our rights should it be ultimately determined that certain of our activities on our low-level radioactive waste disposal site are subject to RCRA. Please note that we have not completed EPA Form 3510-1(6-80) with respect to Question II E since this question is still to be resolved by the EPA. Also, we have not filed Form 3 but have instead included as a separate enclosure a list of responses to the technical criteria requested in Form 3.

In summary, this filing is not to be construed as a waiver of our position that our Company's low-level radioactive waste disposal operations at Richland, Washington, are not subject to EPA regulations under RCRA.

In the meantime, we shall continue to accept naturally-occurring and accelerated-produced low-level radioactive waste or by-product, source and special nuclear low-level radioactive waste which are slightly contaminated with materials such as toluene, at our low-level radioactive waste disposal site at Richland, Washington. These activities shall be conducted in accordance with the statutes, rules, regulations, and license conditions applicable to the low-level radioactive waste facility. We trust that the Environmental Protection Agency will address this question of jurisdiction at its earliest convenience.

Sincerely,

NUCLEAR ENGINEERING COMPANY, INC.

T. S. Baer
Vice President

TSB/bt

cc: Jane Axelrad
EPA Office of General Counsel

Nuclear Engineering Company, Inc.
9200 SHELBYVILLE ROAD, SUITE 526 • P.O. BOX 7246
LOUISVILLE, KENTUCKY 40207 PHONE (502) 426-7160

October 24, 1980

Douglas M. Costle
Administrator
Environmental Protection Agency
401 "M" Street, SW
Washington, DC 20460

Dear Mr. Costle:

Nuclear Engineering Company, Inc. (NECO) operates two commercial low-level radioactive waste disposal facilities in the western United States, one located at Beatty, Nevada, and the other on the U.S. Department of Energy Hanford Reservation in Washington State. The sites are licensed under Section 274 of the Atomic Energy Act of 1954, 42 USC 2011, et seq (AEA), as amended, by the States in which the facilities are located.

Low-level radioactive material in the form of waste products is shipped to these facilities for disposal. Most of the waste materials are either by-product, source, or special nuclear material as defined in the AEA, and are excluded by the United States Environmental Protection Agency under the Resource Conservation and Recovery Act, P.L. 94-580, 42 USC 6901, et seq (RCRA).

Naturally occurring and accelerator produced isotopes contained in waste materials are also disposed of at these facilities. By law these isotopes do not currently fall within the jurisdiction of the U.S. Nuclear Regulatory Commission (NRC) but are controlled by the individual states and have been incorporated into the regulatory programs of both Nevada and Washington.

This action on the part of both states is a logical extension of the need to cover all radioisotopes and sources of ionizing radiation in one set of rules and to have these rules administered by one agency. The agency regulating radioactive waste disposal activities in Nevada is the Nevada Department of Human Resources, and in Washington is the Department of Social and Health Services.

The problem to be described herein arises when the following facts are recognized:

1) Naturally occurring and accelerator produced isotopes are not regulated by the NRC under its authority as

defined in the AEA and consequently are not excluded from the EPA's authority under RCRA.

2) Naturally occurring and accelerator produced isotopes are not currently addressed in the EPA's regulations implementing RCRA.

3) Certain naturally occurring and accelerator produced isotopes, notably, Carbon-14 and Tritium (H-3), are used extensively for medical and university research and are frequently mixed with solvents such as toluene and xylene, prior to radioanalysis. These solvents are defined as hazardous under RCRA and constitute about 15% of the commercial low-level radioactive waste on a national basis.

4) These radioactive materials are covered by State health regulations and are controlled as extensively as by-product, source, and special nuclear materials.

As you may know, the NRC is currently developing regulations (10 CFR 61) that will further assure the public health and safety at low-level waste disposal facilities. These proposed regulations make provisions for siting, closure, post-closure maintenance and perpetual care among other things.

In view of the above, we recommend that the EPA regulations be amended, or clarified through Regulatory Interpretation Memoranda (RIMS) so that:

1) all low-level radioactive waste disposal sites licensed by the NRC be exempt from RCRA;

2) all low-level radioactive waste disposal sites licensed by Agreement States be exempt from RCRA;

3) all low-level radioactive waste disposal sites licensed by the NRC or Agreement States be exempt from RCRA when the hazardous wastes contain radioactive materials in sufficient quantity to warrant disposal in a low-level radioactive waste site.

If the above action is not taken, the result could be to effectively shut down the vast majority of medical research in the U.S., since disposal of these materials in other than low-level waste disposal facilities is prohibited by State statutes. To do otherwise would also promote an unnecessary and confusing overlap of regulatory processes.

In order to preserve our rights under the interim status standards promulgated by EPA, NECO submitted the required information to the EPA to meet the preliminary notification filing requirements. However, since it is our position that it was not the intent of RCRA to regulate activities currently overviewed by the NRC, NECO will defer submitting the Part A application pending resolution by the EPA with the NRC and the States of Nevada and Washington on this issue.

Sincerely,

NUCLEAR ENGINEERING COMPANY, INC.

T. S. Baer
Vice President

TSB/bt

cc NRC – Document Mgmt Branch

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Appendix B

USEcology

Mr. Charles E. Findley, Director
Hazardous Waste Division
U. S. Environmental Protection Agency
Region X
1200 Sixth Avenue
Seattle, Washington 98101

October 29, 1985

Mr. Richard A. Burkhalter, P.E.
Supervisor, Industrial Section
Department of Ecology
Mail Stop PV-11
Olympia, Washington 98504

Gentlemen:

Enclosed is US Ecology, Inc's Part B Application and Closure/Post Closure Plans for the Richland, Washington facility. This facility, located on federally owned property, is a commercial low-level radioactive waste site, licensed by the State of Washington and the Nuclear Regulatory Commission (NRC). Its daily operations are supervised on a full time basis by on site State inspectors and all activities are also monitored by the Nuclear Regulatory Commission and its Agreement State program audits. The facility has also been the subject of considerable State and Federal legislative scrutiny and, as such, its operations have been closely monitored by the public.

As you are aware, in November, 1980, US Ecology, Inc. (then known as Nuclear Engineering Company, Inc.), the site operator, made a protective filing for a Resource Conservation and Recovery Act (RCRA) Part A application in order to preclude any issuance of noncompliances regarding its receipt of scintillation vials which items may have been interpreted as falling within the RCRA-sphere of regulation. Since that initial filing in 1980, the company has drafted various letters and has met on numerous occasions with federal and state regulatory officials as well as Congressional representatives in order to try and resolve the potential conflicts which exist between the RCRA and 10 CFR 61 regulatory schemes. The present situation of dual statutory jurisdiction places the company under the regulatory purview of the NRC, EPA, Washington State Departments of Ecology and Social and Health Services, as well as interfacing with the Department of Energy. The company has repeatedly sought

to have but one regulatory agency or single-line of authority tasked with the overall responsibility for regulating the site. Such a designation will avoid the potential for conflicting enforcement policies or philosophies, and in turn will assure a coordinated, appropriate and timely response to specific regulatory demands.

However, during the pendency of these activities dedicated to resolving this issue, the company received an April 30, 1985 letter from US EPA, Region X, requesting that the company submit a RCRA Part B application for the Richland facility. While the company is complying with this request by filing the previously referenced documents, it also wishes to point out that it believes that the attached Part B filings may not be required in this specific instance. Specifically, the Part B filings are allegedly being mandated due to the company's receipt of mixed waste -- in this case being confined to the constituents of scintillation vials received at the site. These vials contain substances of toluene, xylene, and benzene, some of which were previously thought to be potential subjects of RCRA regulation. However, their receipt at the site as small quantity generator produced items, as well as their designations and/or shipping configurations, now casts serious questions as to the appropriateness of their inclusion as RCRA regulated substances.

While the presence at the facility of scintillation vials with chemical constituents is known, whether such materials are RCRA regulated is a separate issue. Small quantity generators of hazardous wastes are not RCRA regulated and are not required to use an EPA Uniform Hazardous Waste Manifest form. Since the facility has not received any such forms and the generators have contractually warranted to US Ecology that they will comply with all applicable laws and have indemnified US Ecology for any failure to do so, it can be assumed that the generators do not believe the waste to be RCRA regulated. Even though the company has substantial reservations regarding this material's classification as RCRA regulated, the company took the added precaution of advising its customers via a September 13, 1985 letter (See Attachment B), that effective October 28, 1985, US Ecology will no longer accept scintillation liquids contining toluene, or xylene in any physical form for disposal at its low-level radioactive waste facility in Richland, Washington. Obviously, such prohibition was confined solely to RCRA regulated substances. For a further discussion of the company's position on this matter, see Attachment A, "Scintillation Vials".

US Ecology has limited its discussion solely to the contents of scintillation vials as it believes that this is the only material received at the site which could potentially be RCRA regulated. This position is predicated on the fact that US Ecology is the only company disposing of commercial low-level radioactive waste to have filed a Part A or Part B application and the only waste item which it receives at Richland which is different from that received

at other facilities is scintillation vial materials. Therefore, to conclude otherwise would be contrary to existing facts and regulatory enforcement posture and would give rise to serious constitutional questions regarding equal protection.

The company believes that although there exists some question as to the regulation of this material, its present action was necessary in order to obtain a formal ruling from the agencies regarding this material, and thus requests a formal response as soon as practical. The desire for a formal response is necessary in that the Richland site is the only commercial low-level radioactive waste landfill which currently accepts this waste. Although scintillation vials constituted less than three per cent of the waste received at the facility, we believe this issue has national significance because of the potential impact on medical applications. The issue thus warrants a quick resolution by the Agency as to whether the vials are RCRA regulated in order to avoid a material disruption in the nation's medical and research communities.

For your information, and as set forth in the Part B, US Ecology will complete by November 8, 1985, the installation of five site-associated monitoring wells and thus will be able to conduct RCRA monitoring if it is determined to be applicable. Previous monitoring (in accordance with the company's existing licenses) utilized DOE wells which were located in the vicinity of the site.

US Ecology is submitting its Part B and Closure/Post Closure applications as a protective filing. As such, the company does not, by submitting these documents, admit to the applicability of RCRA to the Richland low-level radioactive waste disposal facility, nor does it waive its rights to supplement or withdraw such documents or request administrative or judicial relief on this matter.

Please be advised that US Ecology, Inc. intends that this letter and attachments be incorporated as an integral part of our Part B and Closure/Post Closure applications.

Very truly yours,

Sidney V. Wright, Jr.
Vice President, Radiological Division

SVW/sw 251

Attachment

SCINTILLATION VIALS

Scintillation vials contain low-level radioactive materials and toluene, benzene, and xylene. Such vials are produced for use in such settings as hospitals and medical research facilties throughout the United States as a part of medical and other scientific testing performed at those institutions. Laboratory procedures that use these vials perform such vital functions as determining the levels of hormones, vitamins or drugs in a patient, diagnosing pregnancy, and detecting cancers and other diseases such as hepatitis. These materials in the vial are often referred to as the "scintillation cocktail".

A scintillation cocktail is often composed of a - scintillating material, a surfactant that serves as an emulsifier, and a solvent to serve as a suspension for the scintillation materials and surfactant. The solvent also has the important function of absorbing the energy produced by the radioactive materials, and transferring that energy to the scintillating material. This function of the solvent is vital to the usefulness of the scintillation vial.

Typical solvent materials for these scintillation vials are xylene, toluene, benzene or other similar organic materials. When these solvents are included in a scintillation cocktail formulation, they constitute an integral part of a usable product not intended for discard. That is, those solvents are a part of the vials as a product. The solvents never separately become waste before they become a part of the scintillation cocktail, nor are they mixed with any hazardous waste either before or after their addition to the cocktail.

At the time when the scintillation formulation is prepared and placed on the shelf for future use, the resultant mixture is a product and not a solid waste as defined in RCRA. At the time that the vial is used, thereby becoming a waste (though not a hazardous waste), the solvent is nothing more than part of that used product.

As outlined in greater detail below, the mere fact that the used scintillation vial may contain a solvent as a part of its content is irrelevant in determining whether the scintillation vial and its contents taken as a whole should be classified as a "hazardous waste". Instead, one must look at the vial and its contents at the time it becomes (or is intended to become) discarded in order to determine whether it is classifiable as hazardous waste. The xylene, toluene, benzene, or similar materials contained in the scintillation cocktail were not placed into the mixture in order for that organic constituent to be disposed of. The fact that the organic component in question was added to the formulation in preparation of a product, and was not in fact added to a solid waste, is important in a final determination of the applicability of RCRA to scintillation cocktails.

40 CFR 261.1(a) outlines the scope of the different Subparts A through D that make up Part 261, as follows:

> (1) Subpart A defines the terms 'solid waste' and 'hazardous waste,' identifies those wastes which are excluded from regulation under Parts 262 through 265, 270, 271 and 124 and establishes special management requirements for hazardous waste produced by small quantity generators and hazardous waste which is used, re-used, recycled or reclaimed.
>
> (2) Subpart B sets forth the criteria used by EPA to identify characteristics of hazardous waste and to list particular hazardous wastes.
>
> (3) Subpart C identifies characteristics of hazardous wastes.
>
> (4) Subpart D lists particular hazardous wastes.

In order for a waste to be characterized as "hazardous waste," it must either fall within a list in Subpart D or contain one of the four characteristics outlined in Subpart C. (There is a provision in Subsection 261.1(b) which allows alternative methods for declaring a material a hazardous waste, but those are not relevent to this discussion, since there has been no action regarding the materials covered here as is contemplated in that section. See 40 CFR 261.1(b).

As outlined further below, the scintillation vials do not fall within any of the lists contained in Subpart D. Likewise, they do not possess any of the characteristics contained in Subpart C. (The sole exception to the absence of a hazardous characteristic is the possibility that vials might be ignitable. Even if the vials are ignitable, this is not sufficient to allow their classification as a hazardous waste because the Company continues to express its willingness to require that the material be placed in absorbent material or otherwise handled to eliminate its ignitability, and, thus, no longer provide a basis for its classification as a hazardous waste.)

Subpart D Lists

Subpart D contains four lists of specific waste. See 40 CFR 261.30 thorugh Section 261.33, and the Appendices thereto. Those lists are as follows:

- P-codes, which list specific hazardous waste from non-specific sources;
- K-codes, which cover generic process waste from specific sources (no specific chemicals); and

- P- and U-codes, which apply to discarded commercial chemical products when intended for discard.

First consider the list of P- and U-code waste.

The P-code and U-code Lists

Both P-code and U-code lists contain specific chemicals which are designated hazardous when they are:

(1) discarded or intended to be discarded as commercial chemical products; or

(2) manufacturing chemical intermediates having the generic names listed in those tables; or

(3) any off-spec (off specification) commercial chemical products; or

(4) manufacturing chemical intermediates; or

(5) containers or inner liners removed from containers being used to hold one of those products; or

(6) residues or contaminated soil or water from a cleanup of a spill of one of those commercial chemical products.

In a comment contained in 40 CFR 261.33 immediately preceding the P- and U-code list, EPA explains the meaning of the phrase "commercial chemical products or manufacturing chemical intermediate having the generic name" as referring:

> ...to a chemical substance which is manufactured or formulated for commercial or manufacturing use which consists of a commercially pure grade of the chemical, any technical grades of the chemical that are produced or marketed, and all formulations in which the chemical is the sole active ingredient. It does not refer to a material, such as the manufacturing process waste that contains any of the substances listed in paragraph e or f. (Emphasis added.)

In the background document for Subtitle C, Section 3001, Section 261.33 issued by EPA Office of Solid Waste on April 30, 1980, the Agency by way of the following comments makes the intent of the applicability of those P- and U-code lists quite clear. On page 5 of that background document EPA states:

> in the development of the proposed rules, a number of persons pointed out that the important part of the hazardous waste generated throughout the country were commercial chemicals that are normally not discarded but, for a variety of reasons, are occasionally discarded.

> Examples given were reduction of inventory, changes in product line, cancellation of pesticides, no further use of remaining stocks and residuals from batch processing manufacturing or formulating operations. In particular, operators of solid waste management facilities indicated that some 'wastes' which they receive are discarded pure chemicals as opposed to typical waste from manufacturing or other activities. These same persons also indicated that off specificaiton chemicals are sometimes discarded. The agency recognized that some of these chemicals and off specification materials were toxic and, even though discarded, only occasionally (and usually in small amounts), could pose a substantial hazard to human health or the environment.

In response to concerns or questions from the regulated community as to whether any solid waste which contained one of those listed chemicals in the P- or U-code list was a hazardous waste, EPA responded on page 9 of the background document:

> A number of commentators misunderstood the proposed rules and assumed that any waste, including manufacturing process waste, containing any of the chemicals listed in the Appendices III, IV, V, and XII would be a hazardous waste. This led several of these commentators to urge that a quantity or concentration level below which the waste would not be hazardous be established for each chemical listed in the appendices. Other commentators urged that, if the appendices only applied to pure chemicals and then only apply when they are discarded, these points should be emphasized. The agency recognizes the language of the proposed rules may have been confusing. Consequently it has substantially rewritten the provision, currently in Section 261.33 of the final rule, and has added an extensive comment to clarify the point raised by these commentators.

The comment referred to in the previous quotation is the comment previously cited on the previous page of this memo. EPA further stated on page 10 of that same document that:

> A few commentators seemed to suggest that Appendices III, IV, V and XII should be used to cause waste containing any of the listed chemicals to be a hazardous waste. This would essentially change the list into a 'characteristic' with its attendant responsibilities for the generator. The agency did not intend such a result. However, the

agency has revised its criteria for listing hazardous waste (See Section 261.11 of the final rules) to include this concept. The agency has developed a list of hazardous constituents, Appendix VIII, and will presume that a waste containing any of those constituents is a hazardous waste unless consideration of other factors, such as quantity of the waste, concentration of the toxic agent or mobility of the toxicant etc., causes the Agency to conclude that the waste does not pose a substantial threat to human health or the environment. This criteria requires the agency to make a determination to list such waste; it is not the responsibility of the regulated community to designate unlisted waste as hazardous waste, because they contain materials on Appendix VIII. Appendix VIII does in fact contain the toxic substances listed in 261.33(e) of the final rule. (Emphasis added.)

Finally, in that background document, EPA concluded on page 20:

> In addition, the agency substantially modified the final list of chemicals. First it has listed only commercial chemical products from manufacturing chemical intermediates, chemicals that are not normally discarded. The reason for this is that Section 261.33 is exclusively designed to regulate these materials in the event they are discarded or intended to be discarded, or discarded as off specification materials, or discarded as residuals in containers or in liners of the containers or spilled. Where the agency's interest in a chemical is because it is a hazardous constitutent of a solid waste, the agency will list the waste or classes of waste that typically or frequently contain such chemicals, in Section 261.33 261.32. The principal effect of this approach has been to eliminate as a class the chemicals listed in appendix which derive from a list of toxic chemicals that are typically found in industrial wastewaters, or its constituents of hazardous waste. (Emphasis added.)

Concurrent with the initial promulgation of 40 CFR 261 in 180, US EPA pulbished a "Guide to the Regulations". In that publication EPA answered the very basic question, "What is Section 261.33?" In answer the agency stated the following:

> Section 261.33 contains a listing of 361 commercial chemical products that are hazardous waste if and when they are discarded, because these are valuable commercial products, that normally are not discarded. For various reasons, however, they are occasionally discarded and when this occurs EPA believes these products may pose a present or potential hazard to human health or the environ-

ment. Thus Section 261.33 brings these commercial products under hazardous waste regulations if and when they are discarded or intended to be discarded. (Emphasis added.)

Additionally, EPA responded to the question "Is a waste a hazardous waste if it contains a commercial product listed in Section 261.33(f) but does not exhibit any of the four characteristics?", EPA's response was that:

> It is probably not a hazardous waste. If the waste is not listed as a hazardous waste, is not a mixture containing a listed hazardous waste, and does not exhibit any of the four characteristics it is not a hazardous waste by virture of containing a commercial product listed in Section 361.33(e) or (f) unless the commercial product was discarded by mixing into the waste. (Emphasis added.)

Also answered in the document was the question "Is a facility that stores the commercial products listed in Section 261.33 prior to their sale subject to the regulations?" EPA's response was:

> No. The commercial products listed in Section 261.33 are subject to regulation only when they are discarded or intended to be discarded. (Emphasis added.)

Even as late as May 9, 1985, John Skinner by issuance of a memorandum regarding the statutory interpretative guidance on treatment of bulk hazardous waste acknowledged the distinction between mixing of materials with product and mixing of materials with waste. Mr. Skinner stated that:

> Section 3004(C)(1) prohibits the placement in a landfill of bulk liquid waste to which absorbents have been added, but does not ban the landfilling of absorbed materials if the absorbent was added before the material became a waste. Hence, the ban applies to a spill of commercial chemical product or manufacturing chemical intermediate listed in Section 261.3 if the absorbent was added after the product became a waste.

Having now established that scintillation cocktails when disposed of are not a commercial chemical product listed as a P- or U-code, it must be determined if the solid waste generated by the use of that scintillation cocktail is contained as an P- or K-code.

K-code List

As stated in Section 261.32, the K-code list includes solid wastes that are listed as hazardous wastes from specific sources. This section's requirement that hazardous waste be derived from specific sources quite

clearly results in the exclusion of liquid scintillation cocktails from the list of hazardous waste by virtue of absence from that table. Clearly the process of using scintillation cocktails in any manner is not contained in the K-code list.

Consideration must now be given to the inclusion of liquid scintillation cocktails in which organics are a component on the list of F-codes.

F-code List

Section 261.31 provides that the F-codes cover hazardous wastes that come from nonspecific sources. F001 through F005 do contain specific solvents which are considered hazardous by virtue of the F-codes when they are spent and intended for discard. Benzene is not included in any of these F-code lists. Xylene and toluene are mentioned in these lists; however, this fact does not require or determine that scintilaltion vials containing xylene or toluene are, therefore, to be classified as listed hazardous wastes. Consideration must be given to the application of the term "spent solvents" as contained in Section 261.31 to see that the scintillation vials are not covered by any of these F-code lists.

On page 31 of the 40 CFR 261.31 background document dated May 2, 1980, EPA explains the following basis for listing substances (including solvents) in the F-code lists:

> Waste resulting from usage of organic solvents typically contains significant concentrations of the solvent. Examples of waste from usage of organic solvents include still bottoms from solvent recovery and spent solvents from dry cleaning operations and maintenance and repair shops.

This basis of the listing of the solvents under F001 through F005 codes does not contemplate the use of solvents in scintillation cocktails and for the purposes for which scintillation cocktails are used, as a source of hazardous waste. This is further evidenced in the analysis in the above noted background document relative to the sources of the waste in typical disposal practices. As stated by EPA:

> [t]he primary solvent-using industries and the quantities of solvents they use annually are as follows: ...paint and allied products or industrial operations, surface cleaning, pesticide production, laundry and dry cleaning operations, pharmaceutical manufacture, solvent recovery operations. Id at p. 36.

This list clearly does not include use of the solvents in scintillation formulations. The only point of contention may be use in the pharmaceutical industry. However, this point is clarified on page 42 of the doucment, in the explanatory material relating to the production of pesticides, pharmaceuticals and other organic chemicals:

> Solvent applications in the production of pesticides, pharmaceuticals and other organic chemicals include usage as a reaction (synthetic) medium, and the usage in equipment cleaning. The solvents used are primarily non-halogenated and are typically selected for compatibility with the production process. Toluene is the most widely used solvent in pharmaceutical manufacture, methanol is used as the reaction solvent in nylon 66 production, and acetone is used as the solvent in the production of cellulose acetate.
>
> Waste from solvent usage in these industries take the form of off-specification product material, equipment cleaning waste, and solvent recovery still bottoms. The destination of all solid waste is not known, but a large percentage is either reclaimed in-house or by contract recovery operation.

Absent from all of the above explanantions about the application of F001 through F005 codes to spent solvents is any implicit or explicit reference to use of organic solvents in formulation of scintillation cocktails. In the "Guide to the Regulations" published by US EPA in 1980, the following question and response are contained regarding the application of the term "spent solvents":

> Q. Are the spent solvents listed in Section 261.3 generated by specific processes or any materials that contain these solvents considered hazardous?
>
> A. The spent solvents listed in Section 261.31 covers spent solvents generated by any and all processes; hence they are not limited to spent solvents derived from specific processes.
>
> These listed spent solvents themselves are hazardous waste. Also any <u>solid waste</u> with which these listed spent solvents are mixed are hazardous waste. Solid waste that may contain some amount of solvents from the manufacturing or other activity in which the solvents are used are <u>not</u>, however, hazardous waste by virtue of their solvent content; they may, however, be hazardous waste for other reasons. (Emphasis added.)

EPA does not view discarded scintillation cocktails, including those containing solvents, in the same that EPA views spent solvents under F-code or K-code lists. This view by EPA is evidenced by the answer to another question contained in that Guideance Document involving hazardous wastes generated by hospitals. In answering that question about hospitals, EPA excluded any mention of some wastes and included others, but most importantly, in making the analysis, EPA specifically <u>excluded any mention of the F-code or K-code</u>

lists. These lists were excluded, because EPA does not view their classifications as including any activities performed at hospitals. Hospitals use and discard scintillation vials. Thus, EPA does not believe that used scintillation vials fall within the P-code or K-code list classificaitons of Subpart C.

Clear from the above discussion is the apparent intent on the part of the Agency that the spent solvents referred to in the F-code list include solvents which have been used in processes normally associated with solvents, such as paint stripping, degreasing, etc. All of these indications on the part of the Agency as to the applicability of spent solvent and F-codes indicate that products in which one of the listed solvents is one of several ingredients are not intended to be categorized as spent solvents when disposed of merely by virtue of the content of the solvent.

In summarizing the non-applicability of RCRA Subpart D codes to scintillation cocktails, one can draw analogy to paints that were manufactured with solvents as one of their constituents. The waste from such paint after its use will contain high levels of the solvents which were included as one of the paint's constituents. EPA has stated that the treatment of such paint waste under RCRA should be through an examination for possible applicability of one of the four subtitle C characterisitics (as opposed to the Subpart D lists). As in the case of scintillation cocktails, the product paint contains solvent as an ingredient. The residue paint is not included in a P- of U-code list as a discarded commercial chemical product. In evaluating the waste paint scenario, EPA has stated that the F-code spent solvents are intended to encompass solvents which have been spent by their use in a traditional solvent process, such as degreasing, stipping, and the like. They were not intended to encompass paint product wastes which contain a solvent by virtue of the solvent content of the original product, nor paint product waste which has had solvent added as a product in order to act as a thinning agent to facilitate easier use of the paint.

Applying the paint analogy above, scintillation cocktails are purchased or provided as product formulations containing a solvent along with a scintillator and surfactant or detergents. Most of these scintillation formulations purchased from manufactures have already been formulated prior to their purchase by the eventual user. Like the resultant paint product waste, the discarded scintillation cocktail contains the solvent by virtue of the use of the solvent in the original product formulation, and not the use of the solvent in a traditional or classic sense.

Thus, discarded scintillation vials or scintillation cocktails, while including organic chemicals as part of their formulation, are in no way included in any Subpart D list (i.e., P-code, U-code, K-code and F-code lists). Consideration must be given to the possible applicability of one of the four Subpart C characteristics (i.e., ignitability, reactivity, corrosivity and EP toxicity).

Subpart C

To determine if the resultant waste scintillation vial is hazardous under such guidelines, one must examine whether the materials are ignitable, reactive, corrosive or EP toxic. The only characteristic of the four contained in Subpart C which might possibly be applicable is that of ignitability (D001).

Many scintillation cocktails containing organic materials have liquid flash points of less than 140 degrees Fahrenheit. If the small-quantity-generator exemption does not apply, the resultant liquid might be classified as an ignitable waste under the D001 code.

Having found the "hazardous characteristics" of the liquid scintillation cocktails as it is contained in the vial in liquid form, the form in which the material will be received must be examined.

Assuming that the scintillation cocktail might be treated as a RCRA hazardous waste by virtue of the characteristic ignitability (D001), when the cocktail is received in solid form (suitably absorbed), the determination for ignitability of a solid must be applied. The solid waste characteristic as stated in Section 261.21(2) is that the waste:

> ...is not a liquid and is capable under standard temperature and pressure, of causing through friction, absorption or moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creats a hazard.

EPA has concurred in this assessment via a request to EPA through its RCRA hotline. Therefore, the scintillation cocktails suitably absorbed and received by US Ecology would not be RCRA regulated hazardous wastes, even if they could otherwise be classified as ignitable hazardous waste without such absorption.

APPENDIX C

Detailed Comments on the Draft Permit, Fact Sheet, and Draft RCRA Facility Assessment Report

The totality of information contained in the Draft Permit, the accompanying Fact Sheet, and the Draft RCRA Facility Assessment Report, prepared by PRC Environmental Management, Inc. ("PRC"), do not show that any remediation is necessary at the US Ecology facility or why it is necessary to include US Ecology in the Permit. The three documents contain inaccurate information and are inconsistent and wholly speculative with regard to the need for remediation of any hazardous substances at the facility. US Ecology is uncertain at this time whether there is any information in the administrative record to support the agencies' principal determinations. US Ecology has attempted unsuccessfully to identify and review any such information.[1] The following

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[1]On February 24, 1992 US Ecology submitted a Freedom of Information Act request to EPA for all records and information regarding US Ecology, its parent company American Ecology, and/or its predecessor, Nuclear Engineering Company. US Ecology contacted Department of Ecology regarding this same request on February 24, 1992 and submitted a request for public records on February 26, 1992. US Ecology was initially told that all publicly available records regarding US Ecology were in the library at the Department of Ecology in Lacey and went to the agency to review this information. With the exception of the Draft RCRA Facility Assessment Report, these documents consisted entirely of reports submitted by or on behalf of US Ecology. US Ecology was told at that time that the information we requested had not yet been collected or reviewed for

discussion addresses the inaccuracies, inconsistencies, and speculative nature of the three documents:

- **Permit p.3, lines 14-17,40; Fact Sheet p.1, Fourth Paragraph.**

US Ecology is not a Permittee under the Permit and has not filed an application to become one. And yet the Permit purports to impose obligations on US Ecology pursuant to its terms as if it had filed an application and would be a Permittee.

- **Permit p.4, lines 21-23 and p.5; Fact Sheet p.2.**

The Permit is to ensure proper implementation of the Hanford Federal Facility Agreement and Consent Order ("FFACO") and "(e)nforcement of all the conditions of this permit, including Part IV, will be primarily through the procedures identified in the FFACO."

Part IV of the Permit includes US Ecology, and yet it was not a party to the negotiations creating the FFACO and the FFACO is not binding upon US Ecology. The parties to this

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exemptions. By letter dated February 20, 1992 US Ecology also specifically requested documentation regarding employee interviews referenced in the 1987 Commercial Hanford Facility Site Closure/Perpetual Care Phase One Final Report from Department of Ecology. To date US Ecology has received acknowledgement from both agencies of these requests. Only as of the afternoon of March 12, 1992 has US Ecology been informed by EPA that responsive documents were available for review; there has still been no response from WDOE.

agreement are the Environmental Protection Agency, the Washington State Department of Ecology, and the United States Department of Energy.[2] This agreement is binding and enforceable only against the parties to the agreement. [3] Although the agreement contemplates agents, contractors and/or consultants of the Department of Energy, and requires them to comply with the terms of the agreement[4], no mention is made of US Ecology, or parties similar to US Ecology. US Ecology is not an agent, contractor and/or consultant of the Department of Energy, and thus is not bound by the agreement.

To include US Ecology in this Permit and thereby attempt to enforce the FFACO against it is an injustice to US Ecology when it was not even a party to the FFACO negotiations wherein many of the conditions, milestones, and schedules of the Permit were agreed upon and have been incorporated by reference. See Permit I.A.4. US Ecology's unique situation vis-a-vis the Permittees has not been considered. By this Permit alone the agencies attempt to impose an additional and inappropriate regulatory scheme upon US Ecology merely because

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[2]See FFACO, Article II (7).

[3]See FFACO, Article II (12)

[4]Id.

it is geographically located within the boundaries of a facility that is the subject of the FFACO and this Permit.

- **Permit I.A.1.b.; Fact Sheet re I.A.1.b.; and Fact Sheet pp.33-4.**

Areas of concern that are "Lands leased by the State of Washington," "are not actively controlled by the Richland Field Office of the Department of Energy," and "which were excluded from the FFACO or which are otherwise determined to be necessary to address in this permit" are included in Part IV, and include US Ecology. In spite of the fact that USDOE did not and does not control the activities of US Ecology, and in spite of the fact that the State of Washington is US Ecology's landlord, the Permit suggests that only "the landowner (USDOE), as the permittee, is being required to perform corrective action to remediate releases from these units as necessary to protect the human health and the environment." Fact Sheet p.34. The State of Washington cannot avoid liability for the US Ecology facility merely because it is the principle author of the Permit.[5]

The parcel of land US Ecology currently occupies is owned by the United States as represented by the United States

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[5]Note that elsewhere in the Permit the State has managed to specifically exclude from the definition of the Hanford Facility for the purposes of this Permit any state-owned land within the boundaries of the Hanford Site. Permit III.1.B.d.

Atomic Energy Commission (the "Commission"). The State of Washington (the "State") leased from the Commission a 1,000 acre tract containing this parcel in 1964 for a term of 99 years("Prime Lease") for the purposes of encouraging the development of nuclear industry related enterprises.[6] California Nuclear, Inc sublet 100 acres of this land in 1965 from the State for development and use as a low-level radioactive waste disposal facility, for a term of 10 years, with an option to renew for two additional fifteen year periods.[7] Subsequently, US Ecology acquired California Nuclear. In 1976 a new sublease was executed between US Ecology (known as Nuclear Engineering Company) and the State, for a 15-year term, with the option of renewing for one additional 15-year periods.[8] The term of this sublease began in 1976 upon the expiration of the prior sublease. This sublease was amended on January 11, 1980 and January 14,

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[6]See lease between the State of Washington and the Atomic Energy Commission, dated September 10, 1964.

[7]See lease between California Nuclear, Inc. and the State of Washington, dated July 29, 1965("State/Cal lease"). This is contrary to the Site Closure Plan, which incorrectly describes this as a 99-year sub-lease.

[8]See lease between Nuclear Engineering Company and the State of Washington, dated February 26, 1976("State/NECO lease").

1982.[9] In 1990, US Ecology extended the Sublease for an additional 15 years.[10]

In the Prime Lease, the State incurs a number of obligations relating to the maintenance and cleanup of the site. For example, the State is required to abide by all laws and obtain all necessary permits.[11] If the State fails to comply with any applicable laws, the Commission can terminate the lease.[12] Upon the expiration or termination of the lease, the State shall, at its own expense, take all measures necessary to decontaminate the land.[13] If the Commission performs any work to this end, the State must reimburse the Commission for the cost. In addition, the State entered into a perpetual maintenance agreement with the Commission, providing for a perpetual maintenance fund.[14] Thus, they have also incurred responsibility to fund or assure funding of any

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[9]See lease amendment dated January 11, 1980 and lease amendment dated January 14, 1982.

[10]See lease amendment dated April 1990.

[11]See Prime Lease § 11.

[12]See Prime Lease § 7.

[13]See Prime Lease § 9.

[14]See discussion in Appendix E regarding the perpetual care and maintenance account and the site closure account.

cleanup.[15] Therefore, under the terms of the Prime Lease, the State of Washington is liable for the clean-up of this parcel of land.

The State has preserved and maintained this responsibility even under, or in spite of, the sublease. This is evidenced by the control that the State retains in both the sublease with California Nuclear and with Nuclear Engineering. For example, the State retains the right of approval over all subleases.[16] Also termination clauses similar to those in the Prime Lease exist in the subleases.[17] The State also retains access to the premises for the protection of the health and safety of the public, for taking readings or samples from, or for servicing, maintaining or repairing, or replacing the State's environmental monitoring devices, and for inspection of the premises to determine if the company is complying with the sublease[18].

However, in both subleases the relevant company, "agreed to assume all obligations and responsibilities" that the State

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[15]See Appendix E.

[16]See State/Cal Lease and State/NECO lease, Article II(8).

[17]See State/Cal Lease and State/NECO lease, Article IX

[18]See State/Cal Lease and State/NECO lease Article VI

did in the Prime Lease.[19] Although each company, thus US Ecology, is liable for the obligations, the State retains its liability. In addition, indemnification clauses exist in each sublease identical to those in the Prime Lease.[20] The State's obligations are not extinguished by the subleases. The subleases merely give the State a cause of action against US Ecology as successor in interest to both companies. Both the Prime Lease and the subleases provide for the continuing obligation of the parties during the closure and post-closure periods. Therefore, if there is any cleanup to be performed at the US Ecology facility, the State is as lessor equally liable for such cleanup. The State cannot avoid this liability merely because the Permit attempts to hold the DOE solely responsible.[21]

Additionally, in 1983, the WDOE became the administering agent for the lease. As administering agent, they are aware of the nature and extent of the perpetual maintenance account and the site closure account. Although WDOE is asserting the need for corrective action, they are ultimately responsible

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[19]See State/Cal Lease and State/NECO lease Article II(2).

[20]See State/Cal Lease and State/NECO lease, Article X(3).

[21]Although US Ecology has provided indemnification for certain activities, this does not dissolve the State's responsibility.

for overseeing corrective action pursuant to both law and the sublease.

- **Draft Permit and Fact Sheet re I.A.1.b., IV.A.2., IV.P.4., and IV.P.4.a.**

The documents are totally unclear regarding who is responsible for any activities under the Permit at the US Ecology site. The documents are internally inconsistent regarding whether the agencies have determined that the US Ecology site is to be included at this time for purposes of investigation or remediation.

Condition I.A.1.b. provides that the US Ecology facility, because it is on land leased by the State of Washington, is, either as a "Solid Waste Management Unit" or "area of concern", subject only to the provisions of Part IV of the Permit, as well as any references in Part IV to conditions in other Parts. The Fact Sheet regarding this condition explains that "(w)hile it is required that these units be investigated for past releases (under either the State or Federal program) it is not the intent of this permit to set operating conditions for those units," and therefore only Part IV applies. (Emphasis added) Condition IV.A.2. provides that "(t)hose Solid Waste Management Units on Table IV.1. (including US Ecology) shall be subject to all provisions of this section of the Permit." Condition VI.P.4 (sic) addresses US Ecology specifically. The Fact Sheet explains that "(i)t

has been determined that the US Ecology site is a SWMU requiring investigation." (Emphasis added) Condition IV.P.4.a. requires the "Permittees" to submit a "RCRA Facility Investigation Work Plan" (RFI) for the US Ecology facility within 90 days a written request by the agencies. The Fact Sheet for this condition states: "It is the intent of the regulatory agencies to have the US Ecology site remediated." (Emphasis added) The Fact Sheet discussion of Part IV generally confirms that the agencies have already determined "that there have been releases to environmental media from past practices" for those units subject to Part IV which were excluded from the FFACO; and that it is the "Permittees" who are required to submit the RFI for each unit subject to Part IV. Fact Sheet pp.33-4.

While it is clear that Part IV was intended to address units requiring remediation that were not part of the FFACO, it is not clear that US Ecology is one of them. The documents reflect the agencies' uncertainty whether only further investigation is required, or whether it is certain that releases have occurred and remediation is necessary. (The PRC Report, as discussed below, sheds no meaningful light on this issue.) Of all of the Part IV units, it is only with respect to US Ecology that the Permit calls for some action to be taken upon the future request on a date uncertain by the agencies; all other units are subject to actions within set

time periods of the effective date of the Permit. IV.P. et seq.

If action under the Permit at the US Ecology site is necessary, it is clear from the above-referenced conditions that the Permittees are required to take such action. US Ecology is not one of the three Permittees identified in the definitional section and elsewhere throughout the Permit and Fact Sheet.

- **Permit Introduction; Permit and Fact Sheet re IV.A.2,, IV.A.1.b., and IV.P.4.a.**

The US Ecology facility is the only unit in the Permit where any remediation is to be conducted under the State of Washington Model Toxics Control Act (MTCA). Inclusion of US Ecology to solely achieve this unlikely eventuality is misuse by the agencies of the purpose and authority of the Permit .

The Introduction and the Permit throughout make clear that the Permit is issued pursuant to the federal RCRA and State Dangerous Waste Regulations authority. For those units that were not part of the FFACO, Part IV of the Permit is the sole mechanism for addressing investigation and remediation of the units. IV.A.2. Condition IV.P.4.a., addressing solely US Ecology, is one of the conditions jointly enforced by the two agencies pursuant to only the RCRA and Dangerous Waste authorities, respectively. Permit Introduction p.6. But

because "Washington is not yet authorized to implement the corrective action provisions of RCRA, therefore EPA is issuing the corrective action portion of this RCRA permit." Public Notice. Wholly unique to the US Ecology facility, the agencies have made the following determination:

> It is the intent of the regulatory agencies to have the US Ecology site remediated. To accomplish this, however, Ecology intends to address remediation of the site under the authority of the Model Toxics Control Act (MTCA). Based upon the results of the remedial investigation, a decision will be made on the next phase of the work.

Fact Sheet re IV.P.4.a.

This is a tortured misapplication of this RCRA permit at best. If MTCA cleanup at the US Ecology site is possible and appropriate, WDOE can choose and attempt to apply such authority directly outside this Permit. This is especially appropriate where for all other units that the Permit defines as CERCLA Past Practice (CPP) units, the Permit specifically exempts such units from inclusion in the Permit. Condition IV.A.1.b. The Fact Sheet for this condition explains that "CPP units are completely excluded from the terms of this permit as they fall within the regulatory authority of the CERCLA program as opposed to the RCRA program." If this is true for the application of CERCLA, why should it also not be the case for the ostensible application of MTCA to the US

Ecology facility? US Ecology should be exempt from inclusion in this Permit by the same reasoning.

- **PRC Report.**

The information contained in the PRC Report is derived primarily from US Ecology, primarily its Part B Application Closure/Post-Closure Plan. Where the PRC Report goes beyond the Part B documents, it is inaccurate, speculative, and unfounded.

(1) Page 1, Section 1.0, Third Paragraph.

The PRC Report makes reference to the fact that EPA has authority to require corrective action for release of hazardous waste and constituents from SWMUs at RCRA-regulated facilities.

The US Ecology facility is not a RCRA-regulated facility. On October 24, 1980, US Ecology's predecessor, Nuclear Engineering Company, Inc., sent a letter to the Administrator of EPA first raising the very issues which are belatedly the subject of this Permit. (Appendix A, Attachment 2-3) This letter specifically requested a dialogue with the Agency regarding the fact that low-level radioactive waste disposal sites licensed by the NRC be exempt from RCRA. Nuclear Engineering requested a timely response from the Agency

because of the then upcoming deadline to file a Part A Application. The Agency never responded to this letter.

By letter dated November 18, 1980, Nuclear Engineering filed Form 1, General Information as part of the Part A process emphatically stating that it was the position of the company that RCRA was never intended to regulate low-level radioactive waste disposal facilities and that the company was not subject to EPA regulations under RCRA. (Appendix A, Attachment 2-3) This filing was made solely to preclude the commencement of any noncompliance enforcement action regarding the receipt of scintillation vials at the Richland facility. Once again, the EPA never responded to the company's specific request to resolve the issue of EPA jurisdiction.

On April 30, 1985, EPA Region 10 requested that the company file a RCRA Part B Application. By letter dated October 29, 1985, (Appendix B) US Ecology submitted an extensive Part B Application and Closure/Post-Closure Plans for the facility. This letter indicates that the company has repeatedly sought to resolve the issue of RCRA jurisdiction and that the Agency consistently failed to respond. This letter again makes it emphatically clear that the company was submitting the Part B documents as a protective filing and was not waiving its rights to withdraw the documents or to challenge the application of RCRA. The Part B documents

themselves are replete with numerous reservations and nonwaivers with respect to RCRA jurisdiction. See, for example, Section 4.0, paragraph 2 regarding low-level radioactive waste "may be defined as RCRA hazardous; Section 4.5.4 regarding closure of "the last RCRA disposal unit, if it is so classified"; and Section 4.5.6 regarding discussion of Inventory Removal as not applicable "since no RCRA waste are stored at the facility." US Ecology's 1985 letter further states that effective October 28, 1985 "US Ecology will no longer accept scintillation liquids containing toluene, or xylene in any physical form for disposal at its low-level radioactive waste facility in Richland, Washington" until resolution of the RCRA issue. The extensive Part B documentation was submitted to both EPA Region 10 and WDOE.

To the company's knowledge, the application was never reviewed by Agency personnel, no comments were received, nor was the application approved. When US Ecology personnel attempted to discuss this application with the agencies in 1989, WDOE personnel generally responded that they were not aware of what had happened regarding the application; EPA personnel stated that the company should talk to WDOE.

(2) Page 8, Section 3,2.

The report correctly notes that low-level radioactive waste has been buried in "unlined trenches." As discussed

elsewhere in these comments, such unlined trenches are appropriate for an NRC facility, but not for a RCRA one.

(3) Page 8, Section 3.2, Last Paragraph.

The statement that Trench 13 is a proposed trench is inaccurate. PRC has confused Trench 13 with Trench 12.

(4) Page 9, Section 3.2, First Paragraph.

The PRC Report states that "there is <u>suspicion</u> that uncontainerized liquid waste have also been disposed of in this chemical trench." (Emphasis added.) The basis for this suspicion is purportedly that a former US Ecology employee told DOE "staff" that past practices included the disposal of uncontainerized waste. US Ecology has not been able to confirm this "suspicion," questions whether any such statements were ever made to DOE "staff," and submits that the conclusion by PRC is unfounded and may be slandering.

(5) Page 9, Section 3.2, Second Paragraph.

"US Ecology acknowledges receipt of scintillation fluids," but never "the likelihood that hazardous or mixed waste were disposed of in trenches prior to November 1985" subject to RCRA jurisdiction. As discussed in (1) above, the Part A was filed solely as a protective filing; the Part B was filed solely because the Agency required US Ecology to do so.

The PRC Report ignores the company's emphatic denials of the applicability of RCRA to the low-level radioactive waste and mischaracterizes the content of the various documents. See, for example, US Ecology's ten-page discussion of scintillation vials, Attachment B to the October 29, 1985 letter to EPA.

(6) Page 9, Section 3.3.

PRC's "Regulatory History" is incomplete and inaccurate. The history is incomplete in that it fails to include the fact that both agencies failed to review and to respond to the company's Part A and B applications in spite of follow-up requests by the company to do so. This section is inaccurate in several respects. First, as discussed in (1) above, the letter accompanying the Part A did not "express uncertainty" regarding the applicability of RCRA; the company denied its application and reserved its rights in spite of its having to file. Secondly, US Ecology never sought interim status or permitted status under the RCRA regime. US Ecology does not consider that it "lost interim status" it never sought. It "is not permitted to receive RCRA-regulated waste" because it has never sought, except under compulsion, such permitted status. Finally, PRC notably fails to recognize the failure of the agencies to in any way respond to the documents filed by US Ecology.

(7) **Page 11, Section 4.1, Third Paragraph.**

As discussed in (4) above, the PRC Report reflects uncertainty ("may") regarding the disposal of uncontainerized waste. In the final sentence, the Report expresses its own uncertainty ("may be RCRA hazardous waste") regarding the applicability of RCRA to the site's waste.

(8) **Page 11, Section 4.1, Final Paragraph.**

The PRC Report states that "(t)he chemical trench is unlined and not covered with an impervious cap." The PRC Report fails to include the fact that the chemical trench is included in the Site Stabilization and Closure Plan submitted to the Washington State Department of Health, Office of Radiation Protection, on October 29, 1990 pursuant to US Ecology's license with that agency. As discussed, the Closure Plan includes a multi-layered cap, with both a synthetic and low permeability cover, for the chemical trench as part of the overall facility closure.

The PRC Report states that "(t)here are no documented releases for this unit." This statement fails to specifically recognize that the groundwater and other monitoring conducted by US Ecology pursuant to its licenses with the NRC and State Department of Health affirmatively demonstrates that there have been no releases from the chemical trench. With respect

to SWMU 1, the chemical trench, the agencies have failed to show that there have been releases of substances requiring remediation.

(9) Page 12, Section 4.2, First Paragraph.

The PRC Report correctly notes that the US Ecology Part B Application "states that Trenches 1 through 11A all contain minor amounts of randomly-placed low-level radioactive waste that may be defined as RCRA hazardous." (Section 4.1, second and third paragraphs.) That the chemicals "may be defined as RCRA hazardous," repeated several times in the Closure Plan portion of the Part B, must be read in context. As discussed, the cover letter and the document as a whole repeatedly deny the applicability of RCRA. Because the agency required US Ecology to submit the Part B, the document, when referring to the waste in question, accurately reflects that whether the waste are indeed RCRA waste is a question still to be determined; the use of the "may" reflects this fact.

(10) Page 12, Section 4.2, Last Paragraph.

The PRC Report notes that the low-level radioactive waste "trenches are unlined and are not covered with an impervious cap" and "(t)here are no documented releases from these units." Again, the PRC Report fails to include a discussion of the details of the multi-layered cap in the Closure Plan

submitted to the State Department of Health. Again, the PRC Report fails to show that the monitoring pursuant to the licenses at the facility demonstrates that there have been no releases of substances from the trenches, rather than create the inference that there is simply no documentation regarding releases.

(11) Page 13, Section 4.3.

The PRC Report fails to include a discussion of the fact that the underground tanks were closed in accordance with a plan submitted to and approved by the State of Washington.

(12) Page 14, Section 4.4, Last Paragraph.

Contrary to the PRC statement, the oil tank is stored on a bermed cement pad.

(13) Page 14, Section 5.0, First Paragraph.

The PRC Report concludes: "Potential exposure pathways for humans include inhalation and ingestion of contaminated soil particles, dermal exposure to contaminated soils, and inhalation of volatile organic compounds." With respect to the chemical trench and the scintillation vial waste, this conclusion is professionally irresponsible. The chemical trench was closed in 1972; the facility ceased receiving scintillation vials in 1985. As required by the low-level

radioactive waste regulations, all waste was immediately buried to prevent worker exposure, and all waste have since been covered with a layer of cobbles or site soils. It is impossible to conclude that "inhalation is primary pathway of concern."

The State of Washington's own Assessment of Risk Associated with Operation of the Hanford Commercial Low-Level Radioactive Waste Disposal Facility, prepared by ICF Incorporated June 30, 1987, does not support the PRC conclusion. Assessing all five pathways of potential risk, that report concluded that there is a moderately likely-to-occur risk from airborne contaminants if, and only if, "some future waste shipment to the LLW disposal site would contain enough flammable or explosive material that an accident during handling could cause an explosion of fire that could disperse the shipment." (Section 3.2.1). The likelihood of this occurring "is strongly affected by the extent to which the regulatory agencies inspect and enforce the rules," and is lessened by the inspections performed by US Ecology personnel, as well as by the on-site State inspector, on incoming shipments. This scenario simply does not apply to the now long-since deeply buried scintillation vials and chemical waste.

(15) Page 15, Section 6.0, First Paragraph.

The PRC Report concludes: "The Hanford site is seeking a RCRA permit to handle hazardous waste, and the US Ecology facility, as part of the site, is therefore subject to corrective action." This statement is wholly conclusory, wrong, and does not comport with federal or state law.

(16) Page 15, Section 6.0, Second Paragraph.

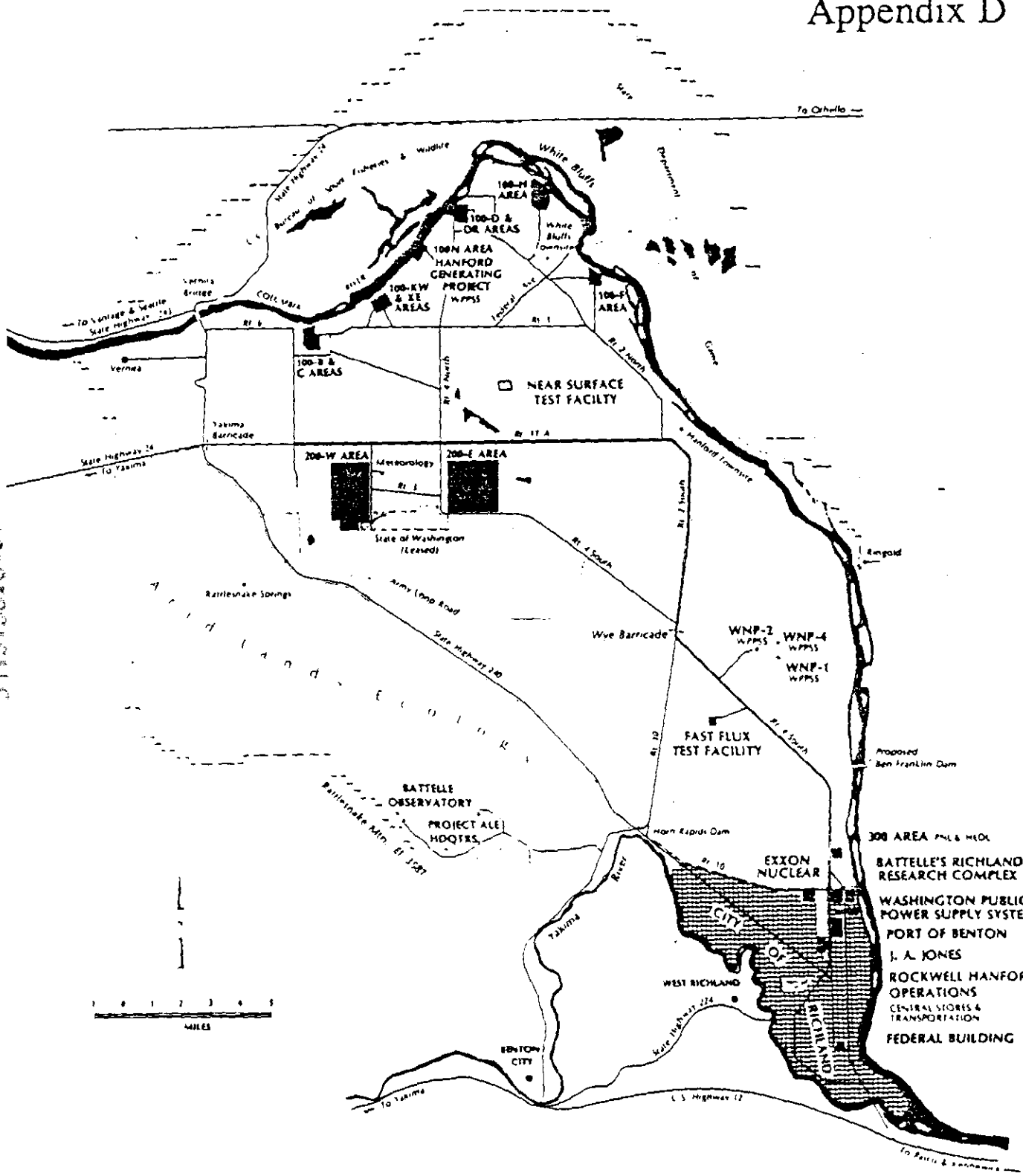
As discussed above, the PRC's conclusion that "(i)t is likely that there have been environmental releases from SWMU 1 (chemical trench)" is speculative. All monitoring at the site, including ground monitoring in five wells, demonstrates that releases have not occurred. US Ecology has received contradictory information from Joe Witzcak of WDOE regarding his allegations set forth in the PRC report. Finally, the PRC Report fails to address the results of the vadose zone monitoring program being conducted.

(17) Page 16, Section 6.0, First Paragraph.

The PRC's unsubstantiated conclusion that "(e)nvironmental releases have potentially occurred from SWMU 2" is meaningless.

(18) <u>**Table 1**</u>.

In light of the above discussion, words used by PRC throughout this table, "could result" or "possible releases," reveal further the speculative and unsubstantiated nature of the PRC report generally.



HANFORD SITE

Department of Energy

APPENDIX E

I. Perpetual Maintenance Fund Regarding the US Ecology Facility Site

The 1965 Session Laws for Washington State amended RCW 43.31 to give the director of Department of Commerce and Economic Development, through the Office of Nuclear Energy Development, certain powers and duties relating to nuclear energy. The director became responsible for the perpetual surveillance and/or maintenance of radioactive materials held for waste management purposes at any publicly or privately owned facility located within the state. This function is currently being implemented by the Washington Department of Ecology.

In order to finance this responsibility, the director was given the power to collect fees from public or private parties holding radioactive materials for waste management purposes. He could collect a total of not less than five cents, nor more than fifty cents, per cubic foot of space occupied by materials held, stored or buried. All fees were transmitted to the State treasurer who placed the money in an account labeled "perpetual maintenance fund." This fund was to be used exclusively for surveillance and maintenance costs at waste management facilities.

The director was also given the authority to enter into agreements with the federal government to assume perpetual surveillance and/or maintenance of lands leased or purchased from the federal government and used as a burial or storage site for radioactive wastes.[1] In July of 1965, the State, pursuant to this authority, and the Commission entered into a perpetual care agreement, where the State assumed perpetual care of the present US Ecology facility site ("Site").[2]

The State agreed to deposit annually during the term of the sublease with California Nuclear, or any successor sublessee, $2,000 or 5 cents for each cubic foot of radioactive waste stored or buried, whichever is greater. The deposits were placed with the State Treasurer, who placed the money in the Perpetual Maintenance Fund described above. The fund was earmarked exclusively for defraying the costs of insuring perpetual maintenance and surveillance of the Site. If at any time the Commission or the State decided that the fund is not sufficient, or that a surplus of funds exist, the Commission or the State may request an increase or decrease

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[1]With regard to the present US Ecology facility, in the 1964 lease between the Energy Commission and the State of Washington the State agreed to return the leased premises to the government with radioactive contamination reduced to a level satisfactory to the Commission, except land or facilities over which the State agrees to assume perpetual care under agreement with the Commission.

[2]See Perpetual Care Agreement, dated July 29, 1965.

respectively, in the State's annual deposit. A review of the adequacy of the fund is required to be made at the expiration of the lease between the State and the Commission. The Commission and the State must mutually approve any disbursement from the fund.

Upon expiration or termination of the lease between the Commission and the State, the Perpetual Maintenance Fund will be transferred to the Government for deposit in a trust fund of the United States Treasury to be used exclusively for surveillance and maintenance of the Site. The Commission, in lieu of requiring the transfer, may elect to sell the State the land. If the land is sold to the State, the perpetual maintenance agreement will be terminated.[3]

In the 1965 sublease between the State and California Nuclear Inc., California Nuclear agreed to undertake all surveillance and maintenance as required by applicable laws.[4] If at any time California Nuclear defaults or fails to comply with the terms of its licenses, or withdraws from the premises, the State must assume surveillance and maintenance obligations and pay surveillance and maintenance costs.

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[3]Presumably, the RCW would still require the maintenance of the fund.

[4]See lease between California Nuclear, Inc. and the State of Washington.

California Nuclear agreed to pay to the State $2,000 annually during the sublease and five cents for each cubic foot of radioactive waste in excess of forty thousand feet of waste stored or buried annually. The State had the option of raising this amount to fifty cents as necessary. In order to assure that these funds would be readily available and unencumbered, California Nuclear, prior to commencement of burial or storage operations, deposited twenty thousand dollars in escrow as collateral for the annual minimum payments.

In the February 26, 1976 sublease between the State and Nuclear Engineering Company, the company again agreed to undertake all surveillance and maintenance as required by law, regulation or licenses.[5] With the sole exception of the amounts required, the provisions were unchanged from the 1965 sublease. Nuclear Engineering agreed to pay eight cents for each cubic foot of radioactive materials and wastes buried or stored. The Company also agreed to deposit an amount equal to that due for fifty thousand cubic feet of material every January first, to be used as a credit against their obligations.[6] The 1980 amendments to the sublease between the

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[5]See lease between the State of Washington and California Nuclear.

[6]Subsequently the Commission and the State amended the Perpetual Care Agreement on July 22, 1976. The State must deposit annually a sum of money

State and Nuclear Engineering Company raised the amount payable to twenty five cents per cubic foot, with a deposit for 100,000 cubic feet of material due each January 1.[7]

The 1982 sublease amendment further raised the rates to one dollar and seventy five cents for each cubic foot of materials or waste buried or stored.[8] When the amount collected reached six million dollars or the Northwest Interstate Compact of Low-Level Radioactive Waste Management was formally ratified by Congress, the State was required adjusted the rate to reflect the prevailing rate at other sites across the nation.[9] Within two months of the fee adjustment, the State and US Ecology were required to conduct a joint technical study to reevaluate the then existing site conditions as they related to the adequacy of the perpetual care and maintenance account. The account, as of January 1992, contained $18.6 million. No money has been withdrawn from this account.

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equal to the net amount received by the State from the subleases during the year.

[7]See Sublease Amendments dated 1980.

[8]See Sublease Amendments dated 1982.

[9]This Amount was reached in 1984.

II. Site Closure Account

The 1982 sublease amendments also provided for a closure fee to be deposited in a segregated account in the Perpetual Maintenance Fund. These fees are to be used for paying all reasonable costs of closure after the termination of waste disposal activities as required under the facility license and Article X of the sublease. The Company agreed to pay, on a quarterly basis, twenty five cents per cubic foot of radioactive materials and waste permanently stored or buried at the low-level radioactive waste facility. The payments were to continue until the effective date of the exclusionary provisions of the Northwest Interstate Compact on Low-Level Radioactive Waste Management is formally ratified by Congress or the balance of the account reaches one million dollars. At this point the parties will conduct a joint technical study to determine whether additional closure fees are required. Although technical meetings have been held between US Ecology and the State, this study has not been completed.

In the event that the Company performs closure activities at the facility after the termination of waste disposal activities, the State warranted that the Company will be reimbursed, plus a reasonable profit, from the monies collected for closure. The State, after satisfactory performance of closure by the Company or any other entity,

must transfer any unexpended monies from the closure account to the perpetual maintenance account. By January 30, 1982, the company posted a surety bond of five hundred thousand dollars, effective for a period of one year, payable to the State should the company leave the site without accomplishing the closure conditions of the license. On January 30, 1983 the company posted a surety bond for one year in an amount which represented the difference between five hundred thousand dollars and the present balance of the closure account.

In 1989 a new RCW section was added to ensure site closure under the amendments to the sublease. The provision provides for two accounts under the perpetual maintenance fund, the site closure account and the perpetual maintenance account. The site closure account is exclusively available to reimburse the site operator for its closure costs plus a reasonable profit. If a balance remains after closure, it will be transferred to the perpetual maintenance account.

State of Washington Substitute House Bill 2956, which was signed into law on March 13, 1990, allowed the Department of Ecology to transmit a $10.00 per cubic foot surcharge into the closure fund. The balance in this account as of September 30, 1990 was $4,646,837.19. Due to the surcharge, this number increased to approximately $10.4 million by January 1992. No money has been withdrawn from this account.

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